OOI Data Labs 2024 Design Workshop

October 17-20, 2024   *Chauncey Center, Princeton, NJ*

Workshop Goals

1. Review OOI Data Lab Manual pedagogy, design, structure and scaffolding.
2. Design 2-3 new Lab Manual chapters and update selected existing Lab Manual activities based on community needs assessment feedback.
3. Outline a framework and target audience for classroom activities using Python notebooks to access OOI data.
4. Develop a collection of Python-based data analysis activities appropriate for novice programmers.
5. Ensure that data widgets are properly scaffolded to be accessible to instructors and students from a variety of backgrounds

Thursday, October 17 – Welcome

*Arrival and check in throughout the afternoon
> *Hotel check in is at the main desk on the first floor lobby*
> *Workshop Registration is in the Mallard Room. Pick up materials and socialize!*

6:00 pm   **Welcome Dinner at the Chauncey Center**
                 Solomon Dining Room, Second Floor

7:30 pm   **Introductions** (Janice)
                 Mallard Room

7:45 pm   **Getting Started: Who is our primary audience?** (Anna & Janice)
                 Empathy Exercise: Clarification and discussion of target audiences and target courses for both lab manuals.
                 Pass out Backwards Design materials and briefly review (Janice)

Friday, October 18 – Day One: Lab Design and Selection

8:00 am   *Breakfast (available 7am-9am) - Solomon Dining Room*

9:00 am   **Welcome / Goals of the Workshop** (Anna/Denise and Dax/Sage)

9:15 am   **Pedagogy Review** (Janice)
                 Learning Cycle - Engage/Explore/Make Meaning

10:00 am   Divide into 2 design teams and discuss roles of participants in design process

10:15 am   *Coffee Break*

	Python Notebooks (Sage & Dax) Pintail Room	**Lab Manual** (Anna, Denise & Jean) Mallard Room
10:30 am	**What should the end product look like?** ● Evaluate the design of existing Notebook exemplars ● Review options for the final format (e.g., Jupyter Book) ● Discuss overall lab manual structure (Do we mirror the Lab Manual?)	**What will Lab Manual 3.0 include?** ● Review needed changes for existing labs 1-5 ● Review suggestions for new labs ● Examples curated by Jean ● Prioritize options for revisions and new activities
11:00	**What topics/skills should the notebooks include?** ● Ocean Concepts ● Data / Analysis / Coding Skills ● OOI instruments, events, and other known cool datasets/stories	
11:45	**Notebook activity structure & pedagogy** ● Review possible pedagogical approaches to structuring labs ● Develop a Lab Activity template ● Identify additional background elements and content needed in each activity, as well as how to structure the Instructor's Guide(s)	
12:15 pm	*Lunch - Solomon Dining Room*	
1:00	**Data Explorer Demo** (Stace via Zoom) Review how to discover instruments and interesting datasets, bookmarking datasets via Data Views, Erddap download links, time series and profile graphs, notable "raw" datasets, etc.	
2:00	*Coffee Break*	
2:10	**Teaching with Data Labs** ● Jean (plate tectonics) ● Denise (asynchronous learning): Lab manual lesson (in learning cycle framework) - 8-10 min ● Anna: Lesson involving Lab 8 (upwelling & anoxia) - 8-10 min	
2:40	**How will we get there?** ● Decide on priority topics / labs and notebook outline. How do we sequence the activities? ● Who can work on what?	**Lab Development Planning** ● Form pairs ● Sketch out a rough outline ● Explore available data

3:15 pm   **Road check survey #1**

3:30 pm   *Leave for Princeton*

4:00 pm   **Reception at Mediterra Restaurant**
Groups report on their progress.
Select teams for activity development. Teams start brainstorming ideas.
Reflection: Where are we now, and what's next?

6:00 pm   *Explore Princeton / Dinner on your own. Return to Chauncey via uber/lyft.*

Saturday, October 19 – Day Two: Diving into Data

8:00 am   *Breakfast (available 7am-9am) - Solomon Dining Room*

9:00 am   **Data Literacy** (Janice)
How do we build effective activities, instructional materials, and assessments with data skills in mind

9:30 am   **Activity Development**
Working groups form to dive into data and develop selected activities.
Stace (via Zoom), Sage and Dax are available to assist with finding data.
Groups will share progress and provide feedback to each other at several points during the day.

12:00 pm   *Lunch - Solomon Dining Room*
Optional breakout: Write an Abstract for ASLO 2025 (Abstracts due 10/21/24)

1:00 pm   Dr. Kathy Browne -Summary of lessons learned IUSE project (invited)

1:30 pm   Work Session – continued

3:00 pm   **Creativity Break**: Cupcake decorating competition- explain your approach to data literacy with your cupcake

5:00 pm   **Wrap up Day 2**
Where are we now, and what's next?
Road check survey #2

6:00 pm   *Dinner - Solomon Dining Room*

Sunday, October 20 – Day Three: Completing the Book

8:00 am   *Breakfast (available 7am-9am) - Solomon Dining Room*

9:00 am   Check out, logistics, and general work time!

10:00 am   **Advice from an expert! Groups report out on their activities**
Review and discussion with Dr. Jessica Monahan, Princeton University
Identification of gaps, interactive/data needs, and remaining questions.
Discuss pilot testing strategy.
Next steps / Action Planning

11:45 am   **Closing Thoughts**
Final Workshop Survey

12:00 pm   *Lunch - Solomon Dining Room*

1:00 pm   Return to your life!
Airport shuttles start departures from Main Entrance