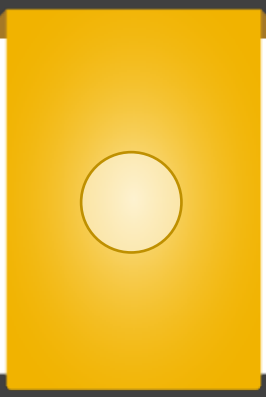
Center for Excellence in Teaching & Learning

Preparing for Fall

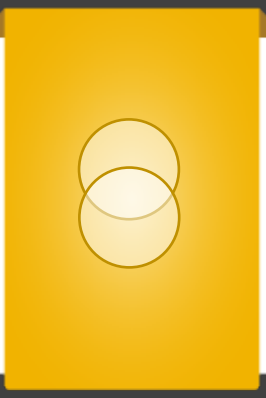
Multiple scenarios | Multiple solutions

University of Idaho



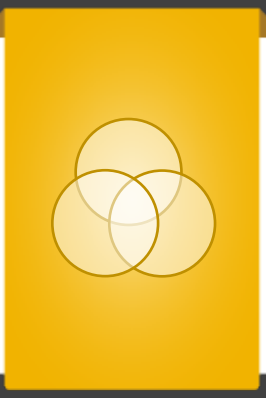
FULLY ONLINE

- Asynchronous sessions
- Establish a presence and build community with audio and video
- Set clear expectations for communication, engagement, & participation
- Provide accessible content in multiple formats
- Consider simulations, presentations, and process-learning techniques
- Use BbLearn for online appropriate assignments, assessments, & feedback
- Create videos and learning modules, but keep them short, clear, & concise



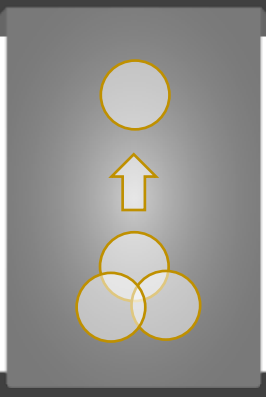
HYBRID

- Blend of asynchronous and in-class synchronous sessions
- Clearly identify when and why synchronous sessions will be held
- Link asynchronous and synchronous content and learning experiences
- Consider "meetings" mindset for synchronous sessions
- Flip the class to make the most of synchronous sessions
- Set clear expectations for synchronous and asynchronous engagement



HYFLEX

- Primarily synchronous sessions
- Two "live" audiences –one in class, another online
- Clearly identify how and when each student/population will participate
- Set clear expectations for communication, engagement, and participation
- Record sessions for students who may not be able to attend live
- Think about parity --equally enriching learning experiences for all students
- Use BbLearn and other tools to maintain a sense of community.



THE PIVOT

- Things can change in an instant, as they did in Spring, 2020
- Plan your class FLEXIBLY, knowing it may go fully online
- Design assignments, assessments, and communication strategies that can adapt to anything
- Think about what a seamless transition would look like and how that would work for you and your students

Talk to us about technology, pedagogy, and inclusive course- and instructional design!

Go To www.menti.com and use the code 76 10 64

What is your biggest concern regarding labs and collaboration in the era of COVID-19?

Framing and open conversation

Goals:

- To generate and share ideas and solutions for lab-, field-, and collaborative-learning experiences.

Opener:

- What do you typically do?
- How do you do it?
- How will that translate into the instructional modality you have selected/been assigned?

- Collaboration and community in a hyflex or hybrid environment.

Sciencey Stuff

- When you think about your classes and labs, what do you really do?
- Virtual or simulation? *They're similar, yet different.*
- **Is student work more observational or interactive?**
- **Computational, analytical, or interpretive?**
- **Is it typically about "the process" or "the product"?**
- **Is it typically in a classroom, an experimental laboratory, or the field?**
- **Let's use these (and other, as defined by you) factors to dig in and consider solutions.**
- PBL or CBL?
- "Think differently about labs"
- Labs v. recitation; your presence or a TA's; linked to the course or in its own orbit; expectations?

Think about project based work and “ways of doing”

- Can you…
  - Focus on interpreting data as opposed to gathering it?
  - Share data they can manipulate?
  - Have students predict outcomes and identify the next steps in a process?
  - Look at work like draft submissions, to give and get feedback, develop a research design, foster hypothesis building, select methods, and predict results?
  - What about the computational stuff? Knowing you got something wrong –and even where you went wrong– doesn’t necessarily help one learn how to get it right…
  - What about “product” based evidence of learning?

Some handy tools from Harvard's Boc Center

- If the focus is on **learning techniques and their application to specific experimental situations**, consider asking your students to engage in online simulations that may cover at least portions of, if not the entirety of a protocol.
- Harvard's LabXchange has just released a suite of lab simulations with assessments and guidance that focus on basic molecular biology techniques. The LabXchange library also includes a curated set of simulations drawn from partner sources like PHET and the Concord Consortium. How to combine these simulations with supporting content and your own assessments is described here. You will be able to assign these simulations with your associated assessments and get your students' performance data. For additional help email: labxchange@mcb.harvard.edu.
- MERLOT and Merlot Skills Commons offer collections of virtual labs in a variety of science disciplines, but note that you will not be able to capture student performance data. Many textbooks also provide interactive lab-based resources if you have adopted the book for your course. Merlot also provides links
- You might consider having your students watch videos of experiments; you can ask your students to first make predictions and then discuss the results. The Journal of Visualized Experiments offers videos of experiments, including many designed for students.

Different Populations, Same Goals

- Biggest Challenges to any learning situation:
  - Fear of being wrong/not knowing
  - Accepting and using feedback
  - Class size/inclusion

- Favorite Collaborative Learning Techniques
  - Think-Pair Share
  - Peer Feedback (provided student are “normed” on a rubric)
  - Opinion Polls to uncover assumptions/pre-existing knowledge
  - Word Cloud to uncover concerns/interests
  - Pro/Con Grid
  - Group Note Taking
    - members focus on an individual element of the phenomenon in question, then combine their elements to create a whole picture of the phenomenon

Tips and examples for HyFlex teaching

- ****Flip it**
  - Even in synchronous classes, a lot of the work –and learning– can occur in-between class sessions, and time in-class can be used for discussions about their learning
- ****Use a modified tutorial model**
  - The "Oxford Model" still works great, and adapts really well to labs and learning of all types.
- **Record every session**
  - Don't underestimate the value of a good lecture
  - Remember that you are an expert and your knowledge helps students understand all the content they are working with.
- **Post supplemental materials**
  - PowerPoints can be voiced-over/narrated. So can google slides. Both accommodate graphics and video, too. While "reading" the slide can be of some value, think of the points you would make about the slide content.
    - Keep them short –research indicates that we lose them faster than we think. Think 3-7 minute modules.
  - Use content from other sources –Data from repositories, videos from various on-line sources, links to major information sources (scholarly and otherwise).
  - Use technology like screencastomatic to record yourself and for students to record themselves. Consider also FlipGrid.
- **Keep students engaged and hold them accountable**
  - You can still do groupwork, projects, presentations, and in-class discussions –maybe just a little bit differently.
  - Have students write something, however brief on what's happening/has been learned in class or from the readings, and do something with that. Use Cognitive Wrappers Template.
- **Replicate or simulate key learning experiences for dual audiences**
  - Work with community partners, do podcast-like interviews with authors, host guest speakers and panel discussions –all online and in real-time.