Teaching Labs Online

Instructional methods for assessing and teaching concepts from a laboratory-based course may include topics like using methods and equipment, analyzing results and data, and conducting experiments.

When planning to teach labs online

- First, prioritize your course goals and evaluate (What has been done so far? And, what's left to do?)
- Next, examine your learning outcomes that have not been achieved yet (Could students achieve this learning outcome? If yes, how? If no, is there an acceptable alternative?)
- Then, determine how you can assess student learning and provide feedback on their progress (What evidence could you collect that students have met your learning goals?)
- Finally, implement instructional materials and activities to reach course goals and achieve learning outcomes (What on-line resources are available? What can I make myself? What on-line instruction would help students achieve specific learning outcomes? How they can practice these skills?)

Resources for Using Methods and Equipment

- Search YouTube
- Make videos yourself and post in Canvas
- JOVE
- HHMI BioInteractive

Activity Ideas for Analyzing Results and Data

- Make up data or use data from old lab notebooks
- Use data & figures from research papers
- Access public data sets, resources for Data

Resources for Analyzing Data

- GEP
- LTER
- LEHIGH U
- NOAA
- NAGT

Resources for Designing Experiments (Virtual Labs)

- MERLOT
- SERC
- ONLINE LABS
- CU Virtual labs
- CourseSource