

Dear Colleagues,

I am writing to share initial ideas for continuing laboratory education during the COVID-19 shutdown of campus. The document was developed by the Leonhard Center and the Office for Digital Learning. Please distribute this information to the appropriate faculty and staff in your Department.

The College will be forming a working group to generate other ideas, consistent with guidance from the University. I will share new ideas as they become available. All of this information will also be posted to a [contingency planning page](#) maintained by the Office for Digital Learning.

Tom

Continuing Laboratory Education during COVID-19 Shutdown

In this unusual situation, it is important to be as flexible as possible to relieve pressure on you and your students. However, we need to do our best meet our objectives for our learning outcomes.

Some questions to consider:

- What are the essential learning outcomes for the labs?
- Can learning outcomes be achieved in alternative ways?
 - Can you create a “pre-lab” review with a quiz in Canvas to work with students to study the pre-lab?
 - Can you do a “live” run-through of the lab using Zoom? If you record the Zoom meeting, you can post it to Canvas so students who cannot join the lab session can watch it on their own time.
 - If Zoom is not feasible, can you create a video of the lab that students must view? Whether using Zoom or a video of the lab, a follow-up quiz in Canvas would help ensure that students watch the video.
 - Can you provide data from past semesters so that students can complete the analysis and discussion parts of the labs?
 - Can labs be shifted to a “virtual format?” Can you find a similar lab online (some resources offered below)?
 - How will you provide [access to disability support](#)?
 - For labs that have a focus on experimental design, can you have students complete the design and submit it to you via Canvas? (source: [Harvard](#))
- If you have Graduate Teaching Assistants working with you,
 - How can you tap their ideas and energies to address the challenges presented by the shutdown?
 - How can you best communicate and collaborate with them in this challenging situation?

Free-access Virtual Labs that may be of use

- [Extensive set of engineering labs developed by Govt of India.](#)
- [Amrita Virtual Labs](#)
- [Merlot](#) is another possible source of virtual labs, but it has a lot of K-12 related material.