

RECOMMENDATIONS FOR LABORATORY PRACTICES UNDER COVID-19

The Ad-Hoc Instructional Task Force strongly recommends the following laboratory practices:

Teaching laboratories are clean spaces, and many of our laboratory practices, if well applied, make laboratories an acceptably safe environment. The Covid-19 pandemic, however, requires additional safety precautions regarding social distancing, personal protective equipment (PPE) as well as surface and shared equipment decontamination.

The recommended PPE requirements for labs heavily reliant on student interactions are personal (purchased by the student, not to be shared) lab coat, masks, face shields/or goggles and, if the lab does not generally provide them, single use gloves. This will apply to all labs where the 6 feet distancing cannot be maintained.

These PPE requirements may be relaxed based on the nature of the laboratory class. For example, in laboratory where the 6 feet social distancing between students can be ensure, instructors may opt for not using face shields/goggles, but face covering (masks) will be required, and gloves may be optional. Laboratory classrooms should be equipped with bottles of 70% ethanol, hand sanitizers and wipes at each laboratory workstation.

Time in the laboratory should be minimized to reduce opportunities for transmission. Therefore, prelab instructions or lecture should be provided online so the students are fully prepared when they arrive, and the lab time is reserved to conduct the experiment and perform measurements only. Instructors may choose to have only half the students present in the lab at any given time.

We strongly recommend that the first lab period be dedicated to safety procedure and proper use of PPE (hand washing procedures, proper wearing of gloves and masks, decontamination of face shields and goggles). If hand washing locations in a laboratory are limited, we recommend providing hand sanitizer at all workstations.

Provide links for training for using PPE properly and washing/decontamination techniques.

We also strongly recommend that laboratory instructors or lab coordinators assess the laboratory rooms and reorganize them to avoid clustering situations (e.g. rearranging balances clustered in one area of the lab to limit student clustering or rearranging the lab sequence of events to limit student clustering.) While rearranging equipment will reduce student clustering, rearranging the lab sequence of events may help reduce the number of students present in the lab at a time. Seating charts should be created during the first day in the lab to facilitate contact tracing in case of need. Lab doors should be propped open at the beginning and end of labs for contactless entry and exit. Entrance and exit to the laboratory should be monitored and organized to prevent clustering (Signage).

To minimize students' movement around the room during laboratory period, we recommend that instructors by having the minimum number of students retrieve materials or move to share

equipment during the lab. As much as possible, share the different responsibilities among students when they work in groups.

We recommend that laboratory classrooms have in place procedures to decontaminate lab coats, face shields/goggles in place before students leave the laboratory (70% ethanol), as well as procedure for decontamination of lab surfaces and shared equipment at the beginning, during and at the end of the lab period. Surfaces should be decontaminated (1) before lab (by staff or faculty), (2) when students arrive at workstation (by students), (3) when students leave workstation (by students), and (4) after students leave the laboratory (by staff or faculty). If a lab course utilizes a lab safety agreement signed by the student, make sure to include a statement about decontamination.

Students should be reminded not to attend if they have any sign of illness and procedures should be in place to avoid penalizing these students.