



Applied Learning Experiences in the (Semi?) Remote Environment: Continuing the Conversation

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Which fall courses/programs have an applied component?

- ▶ Art
- ▶ Non-majors science courses
- ▶ Biology
- ▶ Chemistry
- ▶ Computer science
- ▶ Education
- ▶ ENVS
- ▶ Leadership
- ▶ Music
- ▶ Physics
- ▶ Psychology
- ▶ Public Health
- ▶ Theater
- ▶ Non course-centered experiences:
 - ▶ Honors Program
 - ▶ Scarborough
 - ▶ Directed/independent study research students
 - ▶ Language house

Reports from the field

- ▶ Sciences summer research program – all remote
 - ▶ Faculty collected data in lab or field & students analyzed (me, Dave Baker)
 - ▶ Faculty led students in analyzing data from previous projects/available data and/or writing a paper for submission for publication (Jim, me, Huy, Lance, John)
 - ▶ Faculty led students in literature review/planning for future experiments (David A, Kelli)
- ▶ Scarborough – all remote
 - ▶ Faculty mentor students in conducting independent summer research in humanities & social sciences
- ▶ Social Entrepreneurship for Poverty Alleviation (SEPA) Nonprofit Organization
 - ▶ Invited back previous summer interns to write grants

Potential problems & proposed solutions

- ▶ 1) Insufficient space in assigned rooms for all students to carry out activities concurrently
- ▶ 2) Certain activities require close work between students or between students/faculty
- ▶ 3) Starting in person then moving remote
- ▶ 4) Some group members may need to quarantine/not come to campus
- ▶ 5) Limited availability of off-campus community involvement

1) Insufficient space in assigned rooms for all students to carry out activities concurrently

- ▶ Conduct activities outside/with distancing
- ▶ Expand labs into 2 rooms where available to run concurrently (Genetics)
- ▶ In 3-hour lab sessions, have $\frac{1}{2}$ class in person for 90 minutes, then other half
- ▶ Have students take turns conducting experiments in person vs. concurrent 'dry lab' activities (Chemistry, workshop physics)
- ▶ Reduce student number in research labs (Google sheets document for signing up for spots in shared spaces)
- ▶ Reduce total number of labs/experiences/scope of project/repertoire
- ▶ Shift focus from experimentation to skill-building/information literacy

2) Certain activities require close work between students or between students/faculty

- ▶ Face shields + face masks for short-term close interactions (biology field labs)
- ▶ Build physical Plexiglas barriers to separate work stations (Biology, Chemistry, Art)
- ▶ Language house
 - ▶ Make outdoor spaces accessible for meetings (outdoor projector, improved internet in courtyard)
- ▶ Music ensembles
 - ▶ Break into smaller ensembles
 - ▶ Work on chamber repertoire
 - ▶ Record & broadcast concerts

3) Starting in person then moving remote

- ▶ Faculty conduct experiments & share data for analysis (Physics research, Biology)
- ▶ Plan citizen science/data analytic project that can be conducted either in person or remote
- ▶ Fully flip courses with all lectures pre-recorded & activities that can be conducted either in-person or remote
- ▶ Give students mobile art kit/lab/field materials to take home (Art, Biology)
- ▶ Use free versions of software (Computer Science)
- ▶ Use remote log-ins for software with on-campus license (Physics, Psych, ENVS)

4) Some students may need to quarantine/not come to campus

- ▶ Have video labs/prelabs/materials demos pre-recorded and available online (Chemistry, Art)
- ▶ Design groups with mix of remote & in-person participants (workshop physics)
 - ▶ Use Google docs/cell phones/organization apps to manage

5) Limited availability of off-campus community involvement

- ▶ Leadership capstone
 - ▶ Solve community problems through effective use of technology
 - ▶ Conduct remote research & interviews
- ▶ Teacher program
 - ▶ Video observation tasks
 - ▶ Remote observation of online K-12 classes

Questions for discussion:

- ▶ What applied experiences am I administering in the fall?
- ▶ What challenges posed by that experience haven't been addressed yet?
- ▶ What are some potential solutions to those challenges?
 - ▶ What are the learning objectives for this applied experience?
 - ▶ What do I most want students to get out of it?
 - ▶ What are the safety concerns surrounding this applied experience?
 - ▶ What software do I need students to have access to?
 - ▶ What are the student's career goals?
 - ▶ What sort of experiences do students absolutely need to have before progressing to their career/grad school/professional school?

Other resources

- ▶ Lab options for online courses:
 - ▶ <https://li.wsu.edu/documents/2020/03/how-to-quickly-and-safely-move-a-lab-course-online.pdf/>
 - ▶ <https://li.wsu.edu/teaching-tool-boxes/options-for-virtual-labs-and-simulations-for-laboratory-based-courses/>
- ▶ Conducting remote interviews for oral histories:
<https://www.oralhistory.org/2020/03/26/webinar-oral-history-at-a-distance-conducting-remote-interviews/>
- ▶ Doing (social science) field work in a pandemic:
<https://docs.google.com/document/d/1clGjGABB2h2qbduTgfqribHmog9B6P0NvMgVuiHZCl8/edit>
- ▶ Citizen science projects: <https://www.citizenscience.gov/#>
- ▶ Mentoring Remote Undergraduate Research in Mathematics (but also good general advice for remote research mentoring):
<https://drive.google.com/file/d/1YTz7ul6S8Ly0AUhvWHNRDnZcHf6lcvFS/view>
- ▶ Council on Undergraduate Research:
 - ▶ Resource library: <https://community.cur.org/resources/communitylibraries#GoOnline>