Steps to Mitigate the Impact of Novel Coronavirus on Research Activities

Colorado School of Mines is closely monitoring the coronavirus (SARS-CoV-2) outbreak and associated COVID-19 disease, and extensive emergency procedures are in place. Governor Polis declared a state of emergency for Colorado. Be sure to consult the Coronavirus Updates page, as it contains important updated information for everyone in the Mines community.

**Precautions.** Remember all personnel should stay home if they experience any symptoms including fever, cough, or difficulty breathing. It is also advisable to limit physical contact with others, such as hand-shaking (substitute elbow bumps or bows) and sharing of food. Finally, the most effective prevention measure is frequent, thorough hand-washing.

What special planning should researchers carry out? For convenience, we have included a checklist at the bottom of this message.

**Essential employees.** At this time, there are no plans to restrict access to University research spaces, but it is wise for every research group to plan ahead in the event that full access is not possible for some time period.

**Communications.** If a communications plan for your research group is not already in place, designate points of contact so everyone receives timely information. Communicate with research collaborators at other institutions. As public health measures to counter coronavirus, they may face restrictions as well, which could affect your research.

**Plan for lab safety and researcher time.** Principal investigators and research group leads should discuss approaches now in the event that some personnel are unable to come to work. For example, are team members familiar with each other’s responsibilities? Based on online course delivery, will undergraduate researchers be available on campus? Are there high-risk activities in your lab? Would the unavailability of members of your lab result in people working alone? Should that be avoided? Hint: Researchers should not be performing higher risk activities while alone in the lab or machine shop (see lab safety procedures). Make a plan to clean surfaces with diluted bleach. Such advance planning will minimize disruption to research activities.

**Remote access.** All students, post-docs, staff, and faculty involved in research projects should ensure that they have access to information they need to carry out work remotely. This might include, for example, access to literature, access to existing datasets and research-related files, and access to software, including meeting software (such as Zoom). Principal investigators should prepare to carry out meetings remotely, using similar approaches as for remote learning and remote work. If you are unsure about whether you have access to such tools, it would be prudent to test them now. Work with ITS to determine whether remote access to instruments and systems will be available. Examples of the types of research work that can be done remotely are data analysis, literature reviews, writing proposals, reviews, or research papers, writing the background sections of theses, computational work, meetings, discussions, etc.

**Prioritization.** Depending upon the nature of your research, you might consider prioritizing work that can only be carried out in your research facility, and put off work amenable to
remote support, such as data analysis. Stockpiling results and data now that could be analyzed remotely in the future is a potential option that might create future flexibility.

**Critical supplies.** As a result of COVID-19, are there supplies you need that are in short supply. Please let VPRTT know, and we will help you any way we can.

**Save samples along the way.** If you are carrying out a long-term experiment and if it is feasible to capture samples at specific steps, you might consider doing this more often.

**Proposal deadlines.** In general, we expect that the Office of Research Administration will be able to submit proposals, even if personnel are working remotely. Our experience is that federal agencies are flexible about deadlines under difficult circumstances beyond our control. However, if agencies are officially closed, proposals will most likely remain in a queue, pending resumption of agency operations – as has been the case during federal budget-related shutdowns. Information will be posted on the ORA website, as necessary.

**Travel (updated 3/13/20).** Should you cancel planned research-related travel such as to a conference, site visit, or other laboratory? Yes, the university has suspended domestic and international university-affiliated travel. Be sure to access the current university travel guidance regularly – which applies to everyone who travels on Mines funds, including research grants or contracts. Before embarking on personal travel, consider the possibility of being stranded in a location or quarantined, should travel restrictions back to the U.S. or to Golden be imposed. As always, use your own judgment based on the circumstances. There are health notices for countries with CDC travel restrictions for COVID-19 (e.g., Mainland China, South Korea, Iran, Italy and many European countries). Personnel returning from Level 3 countries must stay home and monitor their health for 14 days.

Advance planning will allow everyone in your research group to focus their efforts and work together as a team, rather than wondering how they and their team members are to proceed. Even if such plans are not needed for the current situation, they are still a good learning experience for the future.

Checklist:

1. Establish a communications plan or remind your lab team of an existing plan
2. Plan for lab safety and identify priorities in case of restricted access
3. Ensure remote access to files, data, software, servers, etc.
4. Prioritize experiments and research activity
5. Plan for remote proposal submission
6. Check travel restrictions before making travel plans.

We express our sincere gratitude to the University of Washington Office of Research. This message is based on their communications to their research community, used by permission.