

New: \$10,000 Biosecurity Research Fellowship

Available to incoming or current first year MEM students in spring of fall of 2024

*Award made possible by a donation from Neil Thomas Buttermore, M.Arch1/M.P.S.,
Waterline Technologies*

BACKGROUND:

Western Colorado University's Masters in Environmental Management (MEM) program is offering a \$10,000 fellowship for a graduate student project working at the intersections of biological security and technology to better mitigate threats to our environment(s). The global pandemic beginning in 2020 has brought new attention to microbiological life and how such threats affect nearly all elements of human life (from the world economy & supply chains through to homeland security). Objectives which set out to better manage a microbial world will lead to a range of technological innovations, all of which influence how our species will both learn and move forward from these events.

OBJECTIVES:

To investigate issues and identify opportunities of special concern in the field of biosecurity as they relate to the following areas of focus. This project is meant to be explored in sufficient depth so that the awardee demonstrates a clear proficiency and produces significant products that could be applied to the Master's of Environmental Management (MEM) 600 hour project if the student chooses to do so.

AREAS OF FOCUS:

1. Indoor Air Quality – research available standards, emerging protocols and technologies, and industry best practices for responses to, and mitigation of, indoor air quality threats related to airborne pathogens. This is especially relevant to border facilities and airports, but is also applicable to commercial spaces and private homes. Relevant material will include, but is not limited to, documents and plans from the Department of Homeland Security and Transportation Security Administration. This is the preferred topic for a 2024 award.

2. Fire - research available standards, emerging protocols and technologies, and industry best practices for responses to, and mitigation of, the effects of wildfires (e.g., post-fire pollution cleanup, indoor air quality during smoke season, deterioration of municipal water quality, etc.). Special attention could be paid to the potential for Artificial Intelligence to assist in identifying wildfire potential and/or the emergence of new fire-fighting technologies (e.g., glycerin for suppression). This is the alternative topic for a 2024 award if topic #1 isn't satisfied.

DELIVERABLE(S):

1. Annotated literature survey, 2. final report, printed and bound, 3. final presentation recording and slides. Further requirements to be provided after the award is offered. Draft deliverables to be reviewed by the MEM Director, MEM mentor and fellowship donor for improvement of final products.

APPLICATIONS:

Send a statement of interest, writing sample, and resume/CV to mem@western.edu by February 15th. Please include the title "Biosecurity Fellowship" in the subject line. Applications will be reviewed by a panel of faculty. Applying students should indicate their willingness and availability to apply approximately 25% of their time for graduate work to this research project.