

APPLICATION FOR THE ARTS AND SCIENCES DEAN'S INNOVATION FUND 2022

Title: *New Frontiers in Teaching Public Health:
Innovative Course Design and Community Engagement in Public Health for CU Students*

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PROJECT ABSTRACT

Students and young adults of today are facing an unprecedented public health crisis. Grappling with global climate crises, degradation of natural physical spaces, and a multi-year long pandemic that escalated mental health challenges pose a multi-prong set of stressors that our campus and students must contend with. But where do we begin helping engage our students in the field of public health to participate in creating a better future? Co-led by two professors from the Departments of Geography and Psychology and Neuroscience, along with implementation support from a teaching faculty in Integrative Physiology. Drs. Reid, Gruber and Floriano are already deeply involved in the development of public health teaching on campus and interdisciplinary teaching initiatives. This proposal would provide funds to support critically needed, and innovative steps towards, a campus that is *student-centered* and on the cutting edge of *interdisciplinary teaching and scholarship*. Specifically, these funds would support development of two new interdisciplinary public health courses for undergraduates that focus on (i) student success and (ii) community engagement and outreach in public health sciences. Taken together, these courses would engage students directly in innovative hands-on research projects as well as apply these tools to the community through a capstone internship project.

PROJECT SUMMARY

Students and young adults of today are facing an unprecedented public health crisis. Grappling with global climate crises, degradation of natural physical spaces, and a multi-year long pandemic that escalated mental health challenges pose a multi-prong set of stressors that our campus and students must contend with. But where do we begin helping engage our students in the field of public health to participate in creating a better future?

Supporting the Campus' Interdisciplinary Student-Centered Vision. Early on, CU Boulder anticipated the importance of engaging a student-centered approach to interdisciplinary learning as a key component to this challenge. Specifically, the 2018 Academic Future report¹ for the University of Colorado Boulder, a visioning document outlining projects that would shape the future of what we want our campus to be, came out highlighting the importance of a student-centered approach to learning (i.e., Project 1) as well as the need to create and engage students with interdisciplinary teaching, research, and creative works (Project 2). One of the recommendations for Project 1 was that “*schools and colleges should make available research experiences and/or internship and community engagement opportunities for undergraduates*”. Project 2 recommendations included “*dramatically increase campus support for interdisciplinary teaching, research, and creative work with a particular focus on problems and opportunities that address public needs and/or involve public engagement*” and “*expand our interdisciplinary and co-teaching educational offerings at both the undergraduate and graduate levels*”. We believe the time is ripe to act upon these important visionary paths of action.

¹ https://www.colorado.edu/academicfutures/sites/default/files/attached-files/academic_futures_report_100118_final.pdf

Critical Need for Public Health Training for CU Students. Similarly, there is a need for more coursework and training in public health on campus. In spring 2014, the CU Student Government (CUSG) formally requested to have a “*strong public health program on campus to meet the demands of our students.*” The current certificate in Public Health was, in part, a response to students’ demand at the time. Already, 1,155 students have graduated with the certificate between May of 2015 and May 2022. Students now demand a major in public health, with a recent poll showing that half of alumni with the certificate would have majored in public health had it been offered. Market research also demonstrates that CU loses students every year to other universities within and outside of Colorado because it does not have an undergraduate major in public health. Dr. Reid has submitted to campus a proposal for an interdisciplinary public health major and minor on campus (to replace the certificate) and is working with various deans and departments to make this a reality, including collaborative engagement from Drs. Gruber and Floriano. This major will rely mostly on coursework that already exists on campus, but to make our public health graduates successful in their chosen field upon graduation, we want to offer two capstone courses that allow students to gain skills in either public health research or public health practice. Yet, innovative course offerings are needed to concretize this vision.

Need for Public Health Approach to Student Mental Health Crisis. Mental health difficulties are a leading cause of daily challenges and disability for our young adults. Furthermore, rates of serious mental health difficulties are rising among young adults, with nearly one in three first-year college students reporting a serious psychiatric disorder. Furthermore, we have seen further increases in mental health difficulties for young adults connected to the COVID-19 pandemic (Gruber et al., 2020). This led the U.S. Surgeon General to declare a “mental health crisis” for young people. These issues have been exacerbated for those young adults who identify or are from marginalized racial and ethnic backgrounds. Hence, there is a critical need to empower our students with the scientific tools and critical thinking skills to engage and tackle public health and mental health issues directly.

Proposed Interdisciplinary Public Health Research and Community Practice Courses

Given these pressing public and mental health concerns, we propose to use funding from the Arts and Sciences Dean’s Innovation Fund to develop two new interdisciplinary courses to allow students to either get involved in public health research or in public health practice. The course on public health research would engage students in a research project led by two faculty members from different disciplines that addresses a public health need within the surrounding community. The public health practice course would guide students through an internship with a local public health department so that they could learn about on-the-ground public health practice as it relates to the local community.

Course 1: Public Health Research Methods Course: Foster Student Success. Many of our students are interested in research and potentially in attending graduate school. A survey of alumni from the public health certificate shows that 32% of respondents were in graduate school, 17% had already received a graduate degree, and 40.6% were planning to attend graduate school in the future. Increasingly, one of the keys to successful graduate school applications is being involved in research as an undergraduate student. While there are opportunities for undergraduate students to get involved in research on campus (e.g., UROP, honors theses, the STUDIO program, and more), many students realize their interest in research too late to develop an honors thesis or apply for one of these programs. The course we propose would involve students in an on-going research project that is led by the instructor(s) of the course and is set up and ready to collect and/or analyze data. The topic could change from year to year, but all with a

goal of engaging students in research that improves life on the campus. For the first year, we propose a study to see whether nature walks can improve mental health among students.

Course 2: Public Health Community Outreach Course: Foster Community

Engagement. Students want more real-world experiences during their undergraduate training. Our community is full of fantastic organizations that could use a student intern to help them meet their public health mission. We have been cultivating a list of organizations who are looking for students engaged in public health to work with them – these include Representative DeGette’s office, the Colorado Department of Public Health and the Environment, Boulder County AIDS project, and more. In collaboration with Public Health Promotion on campus, we will develop a semester-long course to teach students about public health jobs and public health practice as well as coordinate the placement of students in internships and provide them a place of support as they learn to navigate their role in the public health workforce. This will set them up well to transition into that workforce upon graduation.

PROJECT BUDGET

Funding Full Staff Support and Course Development:

Total Budget: \$21,149

The requested budget will support the following expenses:

- **Faculty summer salary:** assist with course development Summer 2023
 - 1 month (without fringe): Teaching Assistant Professor Maureen Floriano \$6,867
Dr. Floriano will use these funds to develop the Public Health Practice Capstone
 - 0.5 month (without fringe): Assistant Professor Colleen Reid: \$5,115
 - 0.5 month (without fringe): Associate Professor June Gruber: \$5,667
Drs. Reid and Gruber will co-develop the public health research Capstone course
- **Part-time support for course development:** assist with course design and community outreach
 - 1 part-time PRA Summer 2023 (w/o fringe): \$2,500/yr.
The PRA will administratively support the development of both courses, working on IRB approval for the research course and reaching out to potential internship partners for the public health practice course.
- **Misc operating expenses:** to cover supplies and materials for courses
 - Course 1: \$500
 - Course 2: \$500