

Curricular Affairs Committee of the Faculty Senate

MEMO

To: Faculty Senate

From: Colby Kervick, Co-Chair Curricular Affairs Committee of the Faculty Senate

Date: 10/5/2023

Re: Approval of a proposal for eight (8) new Micro-Certificates of Graduate Study that are related to the existing Certificates of Graduate Study in Epidemiology, Public Health, Global and Environmental Health, and Health Services Administration submitted by the Graduate Public Health Program of the Larner College of Medicine and the Graduate College.

The CAC approved a proposal for eight (8) new Micro-Certificates of Graduate Study that are related to the existing Certificates of Graduate Study in Epidemiology, Public Health, Global and Environmental Health, and Health Services Administration submitted by the Graduate Public Health Program of the Larner College of Medicine and the Graduate College at our October 5, 2023 meeting. During the 15 day public comment period no comments were received.

Program Description and Rationale

The eight (8) proposed micro-Certificates of Graduate Study are related to the four (4) existing Certificates of Graduate Study in (i) Epidemiology, (ii) Public Health, (iii) Global and Environmental Health, and (iv) Health Services Administration. Two proposed micro-certificates are associated with each of the four existing certificates.

The first pair of micro-certificates are related to the Certificate of Graduate Study in Epidemiology.

Original: Certificate of Graduate Study in Epidemiology

- Micro-Certificate of Graduate Study in Epidemiology
 - PH6020 Epidemiology I
 - PH6030 Biostatistics I
 - One elective
- Micro-Certificate of Graduate Study in Public Health Informatics
 - PH6020 Epidemiology I
 - PH6240 Public Health Informatics
 - One elective

Epidemiology is the “language” of public health and the foundation science of public health programs. Epidemiology has many uses and applications. The Centers for Disease Control and Prevention describes epidemiology as *“the study of the origin and causes of diseases in a community. It is the scientific method of investigation problem-solving used by disease detectives: epidemiologists, laboratory scientists, statisticians, physicians and other health care providers, and public health professionals—to get to the root of health problems and outbreaks in a community.”* Since the beginning of the COVID-19 pandemic, the role of epidemiology in outbreak investigation, contact tracing, and its applications to the science and practice of public health have been essential and highly visible.

- The University of Vermont’s Micro-Certificate of Graduate Study in Epidemiology is an online and concise, 3-course (9 graduate credits) introduction to the field of epidemiology and related quantitative population

health science. Completing this course of study will provide students with introductory competency in epidemiology and quantitative public health science.

- The Micro-Certificate of Graduate Study in Epidemiology is designed for health professional and graduate students, health professionals, public health professionals and researchers, and others who wish to increase their knowledge in the vital field of epidemiology. It also prepares graduates for advanced study at the master's level in public health.

According to the CDC, public health informatics is the systematic application of information, computer science, and technology to public health practice, research, and learning. A foundation in public health informatics can serve to augment existing graduate studies or become the first step towards graduate study in public health.

- The Micro-Certificate of Graduate Study in Public Health Informatics is an online and concise, 3-course (9 graduate credits) introduction into the field of health informatics, epidemiology, and related quantitative population health science. Completing this course of study will provide students with introductory competency in public health informatics and quantitative public health sciences.
- The program is designed for health professional and graduate students, health professionals, public health professionals and researchers, and others who wish to increase their knowledge in the vital field of biostatistics. It also prepares graduates for advanced study at the master's level in public health.

The second pair of micro-certificates is related to the Certificate of Graduate Study in Public Health.

Original: Certificate of Graduate Study in Public Health

- Micro-Certificate of Graduate Study in Public Health
 - PH6010 Public Health & Health Policy
 - PH6020 Epidemiology I
 - One elective
- Micro-Certificate of Graduate Study in Health Equity
 - PH6010 Public Health & Health Policy
 - PH6160 Social Determinants of Health
 - One elective

Public health is the science of protecting and improving the health of individuals and communities. It is a dynamic and challenging, multidisciplinary field blending public policy, research, and population health sciences. The focus of public health is on preventing disease among entire populations, rather than on treating individual illness, relying on quantitative sciences and evidence-based practice. The field of public health is broad, encompassing a variety of disciplines and population-based issues.

- This University of Vermont's online Micro-Certificate of Graduate Study in Public Health is a 9-credit certificate (3 courses) that provides a graduate-level introduction to this field, encouraging students to explore current public health and health policy issues while gaining a foundation in epidemiology, one the foundation science of public health.
- The program is designed for health professional and graduate students, health professionals, public health professionals, researchers and others who wish to increase their knowledge in the vital field of public health. It also prepares graduates for advanced study at the master's level.

Health equity means that everyone has the same opportunity to achieve health, no matter differences in social circumstances, social health determinants, or zip code. As the science and practice of public health have advanced, achieving health equity has become the overarching focus. Public health is the science of protecting and improving the health of individuals and communities. It is a dynamic and challenging, multidisciplinary field blending public policy, research, and population health sciences. The focus of public health is on preventing disease among entire populations, rather than on treating individual illness, relying on quantitative sciences and evidence-based practice.

The field of public health is broad, encompassing a variety of disciplines and population-based issues, and the science and practice needed to achieve health equity continue to evolve. Educating students in social and behavioral factors, as well as the epidemiology and science of social determinants of health serve as a critical foundation to advance public health practice to achieve health equity.

- This University of Vermont's online Micro-Certificate of Graduate Study in Health Equity is a 9-credit certificate (3 courses) that provides a graduate-level introduction to the science and practice of public health relevant to health equity.
- The program is designed for health professional and graduate students, health professionals, public health professionals, researchers and others who wish to increase their knowledge in this vital field of public health. It also prepares graduates for advanced study at the master's level.

The third pair of micro-certificates is related to the Certificate of Graduate Study in Global and Environmental Health

Original: Certificate of Graduate Study in Global and Environmental Health

- Micro-Certificate of Graduate Study in Global Health
 - PH6110 Global Public Health
 - PH6160 Social Determinants of Health
 - One elective
- Micro-Certificate of Graduate Study in Climate Change and Human Health
 - PH6040 Environmental Public Health
 - PH6270 Climate Change and Human Health
 - One elective

The field of public health continues to expand globally in response to emerging public health threats. Infectious diseases are not bound by borders and are often related to environmental change and global factors. Examples like COVID-19, Monkeypox, weather emergencies, and social determinants of health highlight the local and global nature of health and disease. Climate change's impact on weather, disease, food, water, vectors, and emergency response are key components; global sustainable development goals encompass a myriad of global health and social factors.

- The University of Vermont's online Micro-Certificate of Graduate Study in Global Health is a 9-credit (3 course) program that gives students the opportunity to explore the global nature of health and disease including the environment, infectious disease, climate change, global health data, and social health determinants.
- The program is designed for health professional and graduate students; health professionals; public health professionals and researchers; environmental specialists, engineers and scientists; and prepares graduates for advanced study at the master's level.

The field of public health continues to expand globally in response to emerging public health issues. Climate change with its impact on weather, disease, food, water, vectors, and emergency response are key components; sustainable development goals encompass a myriad of global health and social factors. Climate change affects social and environmental determinants of health; projected additional deaths, illness, and costs to human health represent, according to the World Health Organization, the single largest threat facing humanity. Factors impacting human health include, but are not limited to air pollution, allergens and pollen, vector-borne diseases, food and waterborne diarrheal disease, food security, floods, fires and temperature extremes, stress and mental health.

- The University of Vermont's online Micro-Certificate of Graduate Study in Climate Change and Human Health is a 9-credit (3 course) program that gives students the opportunity to explore the human health impacts of climate change.
- The program is designed for health professional and graduate students; health care professionals; public health professionals and researchers; and prepares graduates for advanced study at the master's level.

The fourth pair of micro-certificates is related to the Certificate of Graduate Study in Healthcare Management and Policy

Original: Certificate of Graduate Study in Healthcare Management and Policy

- Micro-Certificate of Graduate Study in Health Services Administration
 - PH6170 Management in Health Services & Med Care
 - PH6210 Controversies in Health Economics
 - One elective
- Micro-Certificate of Graduate Study in Health Policy and Law
 - PH6100 Public Health Law and Ethics
 - PH6260 Legal Issues in Healthcare
 - One elective

Despite progress in health care technology, U.S. life expectancy lags behind peer countries, with worse health outcomes at a higher cost. In addition to the history and structure of U.S. health care delivery, recent changes in systems of care and their financing, create ongoing challenges for policy makers, patients, health professionals, and the public. The COVID-19 pandemic magnified gaps in health services in the U.S. and globally. This program provides an overview of health care policies, organizational structures, and financing systems. These concepts are examined from economic, social, legal, ethical, political, and global perspectives. Financing of health care systems, with emphasis on the roles of health care providers and impact on consumers, are examined. Current strategic and leadership challenges in healthcare and public health organizations is examined through the lenses of consumers, employers, practitioners, insurers, regulators, and public policymakers.

- This Micro-Certificate of Graduate Study in Health Services Administration is a 9-credit (3 courses) program designed for healthcare and public health professionals; students in health professions and other graduate students; and employees and managers of healthcare related programs and organizations.
- This certificate provides a foundation and essential skills for advanced study in public health, public health practice, or a population-health focus for healthcare disciplines.

Efforts to provide universal healthcare access in the United States have spanned decades and many U.S. Presidents. Despite progress, most recently in the Patient Protection and Affordable Care Act of 2010,

universal health insurance for all U.S. residents remains elusive. Major health policy successes to date have encompassed changes in health law, necessitating an understanding of our government and legal aspects of health care. Public health law provides a foundation for study of the policy mechanisms and ethical challenges involved in advancing population health in the United States. In addition to broad health policy initiatives, specific legal issues have contributed to our current system. To advocate for health policy changes, students in public health and health care disciplines must have a critical and foundational understanding of the key factors in determining health policy and law.

- This Micro-Certificate of Graduate Study in Health Policy and Law is a 9-credit (3 courses) program designed for healthcare and public health professionals, students in health professions, other graduate students, and employees and managers of healthcare related programs and organizations.
- This certificate provides a foundation and essential skills for advanced study in public health, public health practice, health advocacy, or a population-health focus for healthcare disciplines.

Justification and Evidence for Demand

As per the Graduate Public Health Curriculum Committee, “The Micro-Certificates have been developed in response to a growing need to improve public health and to better prepare students and professionals to meet the health-related needs of diverse populations in a changing health care system that is increasingly calling for accountability to and for populations.”

The Committee further elaborates the value of the micro-certificates in the face of a “post-pandemic environment... and the need for increased attention to the promotion of public health,” in terms of the sought-after skills that they offer such as those related to “quantitative and qualitative sciences, health services leadership, global and environment health, public policy and law, and even emerging fields related to climate change and human health”, all which are exactly the targets of each proposed micro-certificate.

The Associate Dean further adds that the value of the micro-certificates for students across “several important areas of public health at the graduate level, whether they seek to expand career opportunities or prepare for further study.”

Relationship to Existing Programs

The eight (8) proposed micro-Certificates of Graduate Study are related to the four (4) existing Certificates of Graduate Study in (i) Epidemiology, (ii) Public Health, (iii) Global and Environmental Health, and (iv) Health Services Administration. Two proposed micro-certificates are associated with each of the four existing certificates.

Each of the four existing graduate certificates require 18 credits (6 courses): consisting of 9-15 credits as part of the core competency requirements, and another 3-6 credits of electives from a prescribed list. Each of the eight micro-certificates requires only 9 credits (3 courses).

For every pair of micro-certificates related to one of the existing certificates the 9-credit requirement is distributed as follows: 3 credits (one course) is a *prescribed* course from the core competency requirements list in the existing certificate, 3 credits (one course) is a *prescribed* course from either the core competency requirements list or the electives list of the existing certificate, and the last 3 credits (1 course) is an *open elective* that can be chosen from either the core competency requirements list or the electives list of the existing certificate. Judging from the title of the courses provided in the proposal, the choice of prescribed courses for each micro-certificate demonstrates that each micro-certificate is a streamlined but more targeted and more specialized version of the original existing certificate to which it is related. They address specific skills required by professionals and practitioners in various fields of public health.

Admission Requirements and Process

The process will mirror the requirements and process of applying for the full graduate certificate.

Note: Transfer Credits

Graduate credits taken at other institutions may not transfer into a UVM micro-Certificate of Graduate Study program. Graduate credits taken at UVM as a non-degree student may not transfer into a UVM micro-Certificate of Graduate Study program that requires less than 12 credits to complete ([see Graduate College requirements for micro-CGS](#)).

Anticipated Enrollment and Impact on Current Programs

All of the Micro-CGS use current courses in the Graduate Public Health programs, and as such will be integrated into these course offerings. Based on enrollments in the full Certificates of Graduate Study, the proposers anticipate 1-2 students per Micro-CGS per semester. These offerings will be added to the current website – see [Graduate Programs and Certificates – UVM Public Health](#)

Advising

The existing system of advising will be used. This is the same system as for the MPH and graduate certificates. As these Micro-CGS are 3 courses, each student will have a course plan. It is expected that the vast majority will finish in 1 year or less, as courses are offered spring, fall, and 2 summer sessions. Each Micro-CGS will have a sample course plan on the website.

Further, the mCGSs are designed in accordance with the Graduate School guidelines the program advisors will work with all admitted students in their course planning to make sure that what they are selecting makes sense from a public health education standpoint. This is important because as the proposers note, they “expect to see, more likely than multiple stacked mCGS, students taking 1 mCGS and then completing a CGS or alternatively, making a choice to enter the MPH program.”

Assessment Plan

Applications, enrollments, completion, and alumni next steps (i.e., do they go onto further graduate study, use in their workplace, etc.) will be tracked. Graduation and alumni surveys will be developed specifically for the Micro-CGS modeled after the current graduation and alumni surveys for MPH graduates.

Staffing Plan, Resource Requirements, and Budget

These will be carried out using existing systems, personnel, and budget in the Department of Medicine where the Graduate Public Health programs are located.

Evidence of Support

Strong support is provided from The Graduate Public Health Curriculum Committee and the Christopher Berger, Associate Dean of Undergraduate and Graduate Education and Postdoctoral Training.

Summary

The new proposed micro-certificates will be valuable additions to the UVM Graduate Public Health Program curriculum by providing innovation in the “graduate public health education in an area of focus that has proven market demand for the University and will expand an area of excellence in Graduate Public Health.” The proposed micro-certificates “enhance online offerings to both graduate and professional audiences in this timely and needed area”, and will contribute to the students’ “academic, professional, and personal advancement” by preparing them for “several important areas of public health at the graduate level, whether they seek to expand career opportunities or prepare for further study.”

If approved by the Faculty Senate and Board of Trustees, these micro-certificates will be implemented starting with the FY 24-25 catalog.