2023-24
PUBLIC & COMMUNITY HEALTH
Degree Offered: Doctor of Philosophy

MCW GRADUATE SCHOOL

Program Description
The purpose of this PhD Program is to transform the research paradigm in public and community health by educating a new generation of innovative researchers who will integrate the rigors of the traditional public health sciences with the essential components of community health improvement through participation and partnership.

Admission Requirements
In addition to the general Graduate School admission requirements, this program has additional specific requirements.

If the undergraduate degree is not in public health, then applicants are required to have six credits of psychology, sociology, or anthropology, three credits of anatomy, physiology, or biology, three credits of statistics and three credits of research methods. Research or professional experience relevant to public and community health is required; graduate degrees (MA, MPH, MS etc.) are not required for admission consideration.

Fields of Study
Students will discover and participate in innovative research conducted by faculty at the Medical College of Wisconsin.

PhD students have the opportunity to learn from these nationally recognized leaders in public and community health utilizing interdisciplinary approaches to complex public health issues.

Credits Required to Graduate
60 credits minimum

Program Credit Requirements
Full-Time

The program is designed for a four-year, full-time commitment. All full-time students in the program are required to be enrolled in a minimum of 9 credits in the fall and spring semesters and 6 credits in the summer. The student is responsible for maintaining full-time enrollment. Full-time students must complete the required coursework and need a minimum of 60 credits to graduate. Students must maintain a full-time credit load each semester to be eligible to receive a stipend.
*The program director may waive program requirements in exceptional circumstances.

Part-Time

It is recommended that all part-time students in the program be enrolled in 1-8 credits in the fall and spring semesters and 1-5 credits in the summer. The student is responsible for maintaining part-time enrollment. Part-time students must complete the required coursework and need a minimum of 60 credits to graduate.
*The program director may waive program requirements in exceptional circumstances.

Required Courses

10222 Ethics and Integrity in Science. *1 credit.*
This course provides the basis for understanding the ethical issues related to basic scientific and medical research, including animal and human subject research, fraud, and misconduct, and governmental, institutional, and researcher responsibilities. Bioethics 10222 is offered during the spring and summer terms only.

10444 Research Ethics Discussion Series. *1 credit.*
Prerequisite: 10222 Ethics and Integrity in Science.
The course is directed by members of the Bioethics Faculty and provides facilitated discussions of a series of topics in research ethics. Discussions are led by members of the Basic Science faculty and are focused on ethical issues that commonly come up in biomedical research. The course is meant to not only reinforce the basic ethics taught in the online course Ethics and Integrity in Science, which is a prerequisite, but also to explore the gray areas of the individual topics. The intent is to offer students illustrative examples of ethical issues that might arise in their careers, to emphasize the ethical principles that apply in such situations, and the provide practical guidance on how these types of situations should be correctly handled. This course is offered as a discussion series. Students are expected to attend and participate in the discussion. Bioethics 10444 is offered during the spring terms only.

19150 Introduction to Epidemiology. *3 credits.*
The course provides: 1) an overview of epidemiologic concepts; 2) an introduction to the approaches and techniques that are used to measure and monitor health status in populations; 3) an introduction to study designs to assess disease prevention and intervention; and 4) an introduction to clinical research study designs that elucidate causative factors for disease.

19201 Community Health Improvement I: Foundations of Public and Community Health.
3 credits.
Foundations of Public and Community Health: This course is for students entering the PhD Program in Public and Community Health. The overall goal of this course is to provide students with an opportunity to read, critically reflect upon, and actively discuss the course material with classmates and the instructor. Course materials encompass a review of conceptual foundations, theoretical approaches, and critical perspectives on public health policies in the public and community health.

19202 Community Health Improvement II: Health Disparities and Underlying Determinants of Health. *3 credits.*
Prerequisite: 19201 Community Health Improvement I: Foundations of Public and Community Health.
Health Disparities and Underlying Determinants of Health: This course is for students enrolled in the PhD Program in Public and Community Health. This course will provide students with an in-depth introduction to health disparities and social determinants of population health. The course will help clinicians and other public health students and professionals develop and strengthen their knowledge, skills, and ability to critically examine issues of health disparities and to develop a better understanding of some of the underlying social determinants of health disparities, from a multidisciplinary perspective. The ultimate goal of the course is to

help students develop the skills needed to apply knowledge and theory of health disparities and determinants of health in designing health services and epidemiological studies and interventions to reduce and ultimately eliminate health disparities.

19203 Community Health Improvement III: Principles and Practices of Community-Academic Partnerships. *3 credits.*
Prerequisite: 19201 Community Health Improvement I: Foundations of Public and Community Health.
Principles and Practices of Community-Academic Partnerships: Community-Based Participatory Research (CBPR) is a collaborative approach to research that combines methods of inquiry with community capacity-building strategies that bridge gaps between evidence-based knowledge and community health practices. Fundamental to creating positive change in a community is to establish processes that foster community engagement. Design and implementation of CBPR should include participation, reflection and empowerment of communities who seek to improve their health or social situations. Students will be exposed to definitions and principles commonly utilized in CBPR. Lectures, readings and discussions will expose students to various models of CBPR that originate from community-academic partnerships to implement research agendas that are dependent upon community participation. Students will identify a health issue of interest and a community organization that is working to address a health-related issue. Students will select a model of community engagement and strategically outline steps to secure community participation.

19204 Community Health Improvement IV: Translating Community Health Improvement into Policy. *3 credits.*
Prerequisite: 19201 Community Health Improvement I: Foundations of Public and Community Health.
Translating Community Health Improvement into Policy: This course is for students in the PhD Program in Public and Community Health. Students will apply their knowledge of community health improvement to their understanding of health policymaking in the US. Students will gain understanding of theoretical foundations of policymaking, the policymaking process, and strategies for translating community health improvement activities into policy. Students will develop a policy and advocacy agenda for a current health policy issue.

19225 Introduction to Statistical Analysis Using Stata. *3 credits.*
This course will provide an introduction to the foundations of using Stata for data analysis through an applied format. Statistical analyses covered will include descriptive statistics, univariate and bivariate analysis, and basic regression. Students will become acquainted with the basics of cleaning and organizing datasets, completing descriptive analysis, coding, and interpreting results of univariate and bivariate analyses, as well as linear and logistic regression. By the end of the course students will be able to analyze data independently and interpret results. Coursework will include weekly reading, in-class Stata analyses, and completion of a focused course project developed throughout the semester. Course projects will allow students to develop their skill set and experience independently coding in Stata to complete statistical analyses, and interpreting results within the context of strengths and limitations of their data. The final project will also incorporate both literature review and developing a research question that can be analyzed using existing data.

19226 Regression Analysis Using Stata. *3 credits.*
This course will provide an introduction to the foundation's regression through hands-on training in advanced regression techniques using Stata. Statistical analyses covered will

include multiple linear regression, analysis of variance, logistic, polytomous, and ordinal logistic regression, and mixed models. Students will become acquainted with the basics of coding and interpreting results of regression analyses, as well as diagnostics to confirm correct model fit. By the end of the course students will be able to conduct regression analyses independently and interpret results. Coursework will include weekly reading, in-class Stata analyses, and completion of a focused course project developed throughout the semester. Course projects will allow students to develop their skill set independently coding in Stata to complete statistical analyses and interpreting results within the context of strengths and limitations of each test. The final project will also incorporate both literature review and developing a research question that can be analyzed using existing data.

19230 Qualitative and Mixed Methods. *3 credits.*
Qualitative and mixed methods can be highly useful in the conduct of community-based population health research. This course will provide introductory classroom and field-based learning experience in qualitative and mixed methods research. Students will receive training in the design, implementation, analysis, and synthesis or qualitative and mixed methods. Emphasis will be given to the appropriate uses of commonly used methods in community-based health research. Course participation will provide students with the basic foundation necessary to develop a research study using qualitative or mixed method designs. This course is for graduate students in the doctoral degree program for Public and Community Health.

19232 Qualitative Data Analysis. *3 credits.*
This course will introduce students to the analysis of qualitative data in public health research. The aim of the course is to explore the process of transforming various types of qualitative data (interview transcripts, field notes, and other texts) into analyses and interpretations. We will introduce students to various analytic approaches, explore their use, and guide students in applying them to data. The course will explore both theoretical and practical dimensions of qualitative data analysis, including identifying themes, developing, and using codebooks, making systematic comparisons, and building and testing models. Approaches to qualitative data analysis will include grounded theory and content analysis. Students will also be introduced to the use of computer software for coding and managing qualitative data. The course will emphasize the connection between theory and methodology, with particular attention to the relationship between the research question, study design, data sources, analytic approach, and interpretation of results.

19295 Reading and Research. *1-9 credits.*
Approval from Program Director and/or student's advisor required. The course of study for Reading and Research is designed by each student with his/her advisor to focus on readings in literature in the student's field, to build bibliographic resources for the dissertation, and to conduct supervised, independent research. Full-time students enrolled over four years will take an estimated 38-41 credit,

19301 Seminar. *1 credit.*
This is a weekly seminar for students enrolled in the PhD Program in Public and Community Health. Seminars will consist of several types of presentations: 1) faculty presentations on current research, 2) guest presentations of current research, 3) student presentations of literature supporting their research project, and 4) student presentations of current research in progress. A total of seven semester hours are required.

19399 Doctoral Dissertation. *9 credits.*
This course is required for the completion of the PhD degree. The PhD candidate must submit a dissertation based on original research of a high scholarly standard that makes a significant contribution to knowledge in the field of public and community health. Each student is encouraged to draft one or more papers for publication in a peer-reviewed journal describing results of the research.

Required Courses as Needed

19003 Doctoral Dissertation Continuation. *0 credits.*
This is a form of registration available to students who have completed all of the required coursework, including dissertation credits but have not yet completed the writing of the Dissertation. Continuation status is limited to three consecutive terms following the completion of Dissertation credits.

Elective Courses

Three elective courses at 3 credits each.

19210 Health and Medical Geography. *3 credits.*
Geography and physical and social environments have important implications for human health and health care. This course will explore the intersections among geography, environments, and public health, with an emphasis on geographical analysis approaches for health data, to address two key questions: (1) How can concepts from geography help us to better understand health and well-being? (2) How can geographic tools, such as Geographic Information Systems (GIS) be used to address pressing questions in health and medical research? Students will become acquainted with theories and methods from health and medical geography through readings, discussion, Geographic Information Systems (GIS) laboratory exercises, and the completion of a focused course project. Throughout the semester we will use the concepts and techniques of the discipline of geography to investigate a variety of health-related topics, and laboratory exercises will center on common health and medical geography research questions. Course projects will allow students to develop a deep understanding of the geographical nature of a health problem of their choosing and will incorporate both literature review and the analysis of geographicaldata.

19220 Infectious Disease Epidemiology. *3 credits.*
The Infectious Diseases Epidemiology course will provide graduate students a global understanding of infectious diseases from an epidemiological and public health perspective. We will start with a historical perspective of epidemiology (e.g., John Snow, Typhoid Mary). Then we will discuss general principles of infectious diseases such as temporal trends, seasonality, carriers, incubation period, and main modes of transmission. Basic concepts in microbiology as well as microbiological tools currently available will be described. Similarly, basic concepts in immunology required to understand the mechanisms of actions of vaccines will be provided. These topics will then be followed by a more detailed description of key pathogens grouped by the route of transmission. This will include pathogenesis, control, and global burden of disease.

19229 Survey Research Methods. *3 credits.*
Survey Research Methods is a graduate-level, 3-credit hour course that introduces students to the broad concepts of survey design, conduct, and analysis. Students will gain a detailed

and comprehensive understanding of questionnaire design, sampling, data collection, survey nonresponse, and analysis of survey data. The course will include lectures, reading assignments, class discussions, individual and group presentations, and exams.

19250 Human Health Risk Assessment and Environmental Health Literacy. *3 credits.*
The course will provide a foundation in Human Health Risk Assessment (HHRA) as it is described by United States Health Agencies: The National Research Council, the Agency for Toxic Substances for Disease Registry, and the Environmental Protection Agency. This foundation will then contextualize the emerging field of Environmental Health Literacy (EHL) which is a hybrid of Risk Assessment and Health Communication. EHL thusly draws from well-established methodologies and theories to tackle difficult issues in translational science. Students will gain a detailed comprehension of the historical development of environmental science and how this set of disciplines have integrated with health science. The course will begin with a primer on the philosophical foundations of environmental science by considering late 19th and early 20th century thinkers with accompanied readings. Next, the course will review basic principles of Risk Assessment (with a focus on Human Health Risk Assessment) from the perspective of addressing federal policy. This will lead into some case studies to illustrate the contribution of scientific research to the policy-oriented topic of Risk Assessment. Finally, students will obtain an overview of environmental policy and participate in discussions and assignments that elucidate this important interface between science and society. Students will be evaluated via a midterm exam (20%), a final exam (20%), participation in discussion and organized class debate-styled actives (20%), an oral presentation (20%) and a written essay (20%).

19290 Critical and Analytical Writing. *3 credits.*
Critical and Analytical Writing provides hands-on training, practice, and feedback in the construction of clear, well-written documents and arguments. With a focus on critical analysis and rhetorical situations, the successful student will be able to write effectively to any audience. Interactive sessions and structured assignments highlight the importance of developing these skills you will use throughout your professional life.

Beyond electives offered at MCW, students may complete electives available at MU, or UWM. To ensure rigor and relevancy, the choice of electives is contingent upon approval by the student's major advisor and faculty teaching the courses. Courses must be at the graduate level.