

UNIVERSITY OF MIAMI
MILLER SCHOOL OF MEDICINE

DEPARTMENT of
PUBLIC HEALTH SCIENCES



Program
Guidebook –
Master of Science
in Prevention
Science &
Community
Health

2023 - 2024

DPHS Division of Prevention Science and
Community Health

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INTRODUCTION

Welcome to the Master of Science (MS) program in Prevention Science and Community Health! As a student in prevention science and community health, you will need to familiarize yourself with procedures and requirements that are set forth by both our Department, the Miller School of Medicine's Office of Graduate Studies, and the University of Miami's Graduate School. This program guidebook is meant to serve as an introduction and basic overview of these requirements as well as to provide information on communications and logistics to assure your success as a student. It is important to note that although this program guidebook is meant to provide you with basic information and general requirements of the Master's program, it is not intended to be used in isolation. Rather, this guidebook should be used in conjunction with information contained in the:

- [UM Academic Bulletin](#)
- [MS-PSCH Program within the Academic Bulletin](#)
- [UM Graduate School](#) website
- [DPHS Graduate Programs](#) website
- [DPHS Masters Student Handbook](#)

RATIONALE OF THE MS-PSCH PROGRAM

The purpose of the Master of Science (MS) program in Prevention Science and Community Health (PSCH) is to train the next generation of researchers and practitioners who are committed to reducing the mortality and morbidity attributable to behaviorally-based, preventable causes of illness, disorder, and death; and promoting health and well-being, in the United States and internationally. Our focus is on the community as the primary domain for intervention development, implementation, and evaluation; however, our research spans multiple contexts such as families, peer groups, schools, the workplace, and clinics. We train students whose expressed objectives are to join the prevention workforce. As part of the program, professionals in the field join as guest lecturers and field mentors in order to expose students in the program with "real world" issues and professional responsibilities, which we believe will enhance students' marketability.

There is a great deal of prevention-related expertise in the Department of Public Health Sciences, where the existing PhD program in Prevention Science and Community Health is housed, as well as in other schools and departments around the University of Miami. MS-PSCH students will have ready access to experienced faculty who can train students in cutting-edge prevention science, as well as to PhD students who can mentor MS students throughout the program. The program is designed to reach out to a broad array of students from Public Health, Education, Psychology, Nursing, and Social Work backgrounds (among others), who would be interested specifically in Prevention Science.

The importance of Prevention Science is underscored by the leading causes of death and disability. Of the top nine causes of death, seven are behaviorally based and preventable: tobacco use, poor diet and physical inactivity, alcohol consumption, motor vehicle crashes, firearm use, unsafe/unprotected sexual behavior, and illicit drug use. Additionally, the National Prevention Strategy prioritizes prevention by “integrating recommendations and actions across multiple settings to improve health and save lives.” Strategic directions of the National Prevention Strategy include creating healthy and safe communities, eliminating health disparities, providing clinical and community prevention services, and empowering people. The seven priority areas for these strategies include: tobacco free living, preventing drug abuse and excessive alcohol use, healthy eating, active living, injury and violence free living, reproductive and sexual health, and mental and emotional well-being—all of which are areas of focus within the Department’s Division of Prevention Science and Community Health. Moreover, the mission of the University of Miami’s Miller School of Medicine includes personalized preventive care and health promotion, integration of prevention and wellness principles into medical practice, emphasizing a scholarly approach to wellness and health, and promoting health equity across various segments of the population. These principles dovetail nicely with the field of prevention science and community health, and with the expertise among the faculty within our Division.

Prevention Science is an interdisciplinary field and draws on disciplines as diverse as psychology, education, medicine, epidemiology, biostatistics, environmental health, geography, nursing, economics, and others. Currently, prevention science-based research is conducted in these various departments, with only some overlap or collaboration between and among them. We bring together this interdisciplinary expertise, with the Department of Public Health Sciences faculty, and particularly those in the Division of Prevention Science and Community Health, in a lead role. Further, prevention science research involves collaborating with communities – relying on a bottom-up approach rather than the traditional top-down approach that has dominated much of academic research. Development of an MS program in Prevention Science and Community Health allows for a further extension of our expertise in this area to the various streams of prevention work currently underway in other departments and schools at the University of Miami.

Preventive interventions are built on etiologic work done by scholars in basic-science fields such as epidemiology, population-health sciences, and developmental psychology; are designed by clinicians and practitioners in a broad array of fields; and are disseminated and implemented by community-based scholars in the aforementioned fields. The MS-PSCH program allows students to formalize interdisciplinary training in prevention science and community health while interacting with faculty who specialize in all stages of the process – etiology, intervention design, community empowerment, intervention evaluation, and intervention implementation and dissemination— as well as in various prevention methodologies such as community-based participatory research and mixed-methods research.

Prevention science is a new and emerging field that began to coalesce in the late 1990s and early 2000s, and it has grown exponentially. The field emerged as a response to the difficulties involved in treating problems after they had already appeared. As opposed to treatment approaches, which are targeted toward individuals with specific presenting symptoms, prevention approaches can be targeted toward those with varying levels of risk (including those for whom no risks have yet appeared, in the case of universal preventive interventions). Prevention science provides a flexible, cost-effective set of models through which personally and socially harmful or destructive outcomes can be avoided or ameliorated.

Prevention science interfaces with general public health and biostatistics in many important ways. Broadly, public health focuses on the etiology of disease risk factors, markers, processes, and outcomes. Public health is the science of protecting and improving the health of populations. Biostatistics is the science of developing and refining statistical tools to analyze biomedical and health-related data. Prevention science overlaps with these disciplines in that etiological findings are used to design, adapt, and target interventions to inhibit the development or exacerbation of illness, disorder, and disease; and uses advanced biostatistical methods to design and analyze data on intervention development, implementation, and effectiveness. The MS-PSCH program complements the Department of Public Health Sciences' existing MPH and MS programs in public health and in biostatistics, and provides a natural fit to house these programs within the Department of Public Health Sciences.

By investing in the growth of prevention science and community health through training the next generation of prevention researchers, evaluators, and practitioners, the University of Miami stands to make a major contribution to addressing and reducing the prevalence and incidence of preventable causes of disease, disorder, and death in the United States and internationally. Through cutting-edge research and community engagement, our faculty equip students in the program to step to the forefront of prevention efforts, from local initiatives such as the [Live Healthy Little Havana](#) Initiative to large-scale initiatives such as the U.S. National Prevention Strategy, the Pan American Health Organization's [CARMEN](#) initiative, and the United Nations Office of Drug Control's Global Initiative on Primary Prevention of Substance Abuse. The program solidifies the University's position as an essential partner in local, national, and international health communities.

Our MS-PSCH program is a STEM-designated program, or one that falls under at least one of categories recognized by the US government for its focus on science, technology, engineering, and math (STEM) topics. The program emphasizes practical, as well as scholarly, benefits to the University of Miami. An increasing number of organizations and governmental agencies are interested in professionals with formal training in prevention science. Internationally, we are at a watershed with regard to prevention science as a global phenomenon with need for formal training in countries that are experiencing a growing need for effective preventive interventions. Domestically, most granting agencies within the National Institutes of Health have branches dedicated to prevention, including the National Institute of Mental Health (NIMH), the National Heart, Lung, and Blood Institute (NHLBI), the National Institute of Drug Abuse (NIDA), the National Cancer Institute (NCI), and the National Institute on Alcohol Abuse

and Alcoholism (NIAAA). Having an MS program dedicated to prevention science and community health will increase and broaden evidence-based practice and scientific scholarship, including grant funding and high-impact scholarly publications for the University.

There are three specific goals of the MS-PSCH program:

- (1) Train Masters-level students in the fundamentals of prevention science, which includes (a) the assessment of risk and protective factors that predict and modify health and behavior outcomes; (b) the development of preventive interventions that target these risk and protective factors; (c) the implementation these interventions with individuals, families, and peer groups, and in schools and workplaces that make up our communities; and (d) the evaluation of these interventions to determine the evidence for their effectiveness.
- (2) Develop students' skills in translating prevention research into demonstrable preventive action, including the dissemination of advancements in in the field to constituencies in local, national, and international contexts; and the ability to use this technology for science-based decision making by service providers (community health coalitions, service organizations, and governmental agencies).
- (3) Develop students' skills to successfully partner with community, county, state, national, and international entities to disseminate evidence-based programs and incorporate them with fidelity into service delivery settings with sensitivity to the unique strengths and diversity of culture of communities and their constituencies.

The overarching goal of the program is to develop professionals specialized in prevention science who will have a thorough understanding of the science as well as a focus on the application prevention services to those in need. This goal is in line with the mission of the Society for Prevention Research, which is focused on “advancing scientific investigation on the etiology and prevention of social, physical and mental health, and academic problems and on the translation of that information to promote health and well-being.” The goal also is in line with the missions of the University of Miami’s Department of Public Health Sciences, the Graduate Programs in Public Health, and the Division of Prevention Science and Community Health. These revolve around the improvement of the health of the public, the reduction in burden of disease, and the establishment of health equity among various segments of the population. The program also aligns with the University of Miami’s mission to “educate and nurture students, to create knowledge, and to provide service to our community and beyond” and to “develop future leaders of our nation and the world.” Prevention science and community health, by definition, involve leadership, investigation, and service. Accordingly, our courses help develop the next generation of prevention leaders and prepare them to discover and apply the tools necessary to achieve these goals.

CURRICULUM

The MS-PSCH requires the completion of 33 credits as outlined in the curricular structure table below. There are a number of content areas within prevention science and community health. These areas parallel the phases or steps of prevention research. Roughly, the phases are etiology, intervention design, implementation/dissemination science, and community engagement. These phases represent the process through which basic research can be translated into community practice, but they also represent the broad-level content areas and skill sets that are essential to master.

There are also a number of methodological areas in prevention science and community health that are included in the program. Among these are intervention design and evaluation, structural (population-level) prevention interventions, community-based participatory research, statistical methods in prevention research, using technology in prevention science, managing large-scale research studies, and cultural adaptation of prevention programs. We have decided to focus on general principles, and theoretical/methodological approaches to learning rather than on specific *content areas* (e.g., substance abuse, HIV, obesity), because there is an extremely broad range of areas to which prevention science can be applied, but the principles, theories, and methods themselves are consistent across these areas.

Students are trained in three interrelated domains: theory, methods/analysis, and practice. Preventive interventions are based on theories of individual, peers, family, workplace, and community development, etiology, and change – and in turn, the results of etiological and intervention studies can be used to inform and revise theory. Methods used to analyze data from etiological and intervention studies are continuously evolving, and students are trained in the latest state-of-the-art analytic techniques. Expertise in theory, research methods, and analytic techniques is needed for professionals to effectively apply the science of prevention. Best practice--based on the scientific method and established evidence--is the process by which prevention theories, methods, and analysis are ultimately realized.

Curricular Structure

We take an approach to the program curriculum where all students from each cohort take the same core courses at the same time. Elective courses can be taken separately. Specific courses will be offered in the fall, spring, or summer as appropriate. A full list of [courses and course descriptions](#) is available on the DPHS website; students should refer to the DPHS Course Schedule offerings every semester. The curriculum requirements for the MS-PSCH are as follows:

Core Courses

DEPT	Course #	Course Title	Units	Fall	Spring	Summer
EPH	600	Introduction to the Science and Practice of Public Health	3	x	x	
EPH	617	Disease Prevention and Health Promotion	3	x	x	
EPH	623	Determinants of Health & Health Disparities	3			x
EPH	717	Integrating behavior Health Theories and Models	3		x	
EPH	731	Developing, Adapting and Evaluating Interventions	3	x		
EPH	732	Introduction to Dissemination and Implementation Science	3		x	
			Core Courses =	18 credits		

Statistical/Methods Courses*

DEPT	Course #	Course Title	Units	Fall	Spring	Summer
EPH	xxx	Select from DPHS list of approved methods courses	3	x	x	x
EPH	Xxx	Select from DPHS list of approved methods courses	3	x	x	x
			Statistical/Methods Courses =	6 credits		

Elective Courses**

DEPT	Course #	Course Title	Units	Fall	Spring	Summer
XXX	xxx	Select from DPHS or other dept (approved by advisor)	3	x	x	x
			Elective Courses =	3 credits		

Thesis Courses

DEPT	Course #	Course Title	Units	Fall	Spring	Summer
EPH	810	Section 01- Master's Thesis - PROPOSAL	3	x	x	x
EPH	810	Section DEF – Master's Thesis DEFENSE	3	x	x	x
			Thesis Courses =	6 credits		

*For a listing of approved DPHS Statistics/Research Methods Courses, students should access the One-Stop Shop on Blackboard. The following courses may also be taken to fulfill the statistical/methods courses requirements for the MS in Prevention Science & Community Health: EPH 601, 602 (Prerequisite: EPH 601), and 621.

** Students must select at least one elective course offered at UM with advisor approval. In addition to the DPHS Course Schedule offerings, we recommend taking a look at the listing of [courses](#) offered in the UM's School of Education and Human Development, Community and Social Change MS Ed. program for other courses that may be selected as electives. Students must complete and submit a form (found on the One-Stop Shop on Blackboard) to request authorization to take courses outside DPHS. This form must be submitted three weeks prior to class start date.

Sample Study Plan

Before their first semester, students will meet with their advisor outline their study plan. This plan will be reviewed and revised as needed every semester until the student graduates. The average time to completion of the MS-PSCH is two years. Below is a sample 2-year study plan:

YEAR 1 - Fall

DEPT	Course #	Course Title	Units
EPH	600	Introduction to the Science and Practice of Public Health	3
EPH	617	Disease Prevention and Health Promotion	3
EPH	xxx	<i>Methods</i>	3
Total =			9 credits

YEAR 1 - Spring

DEPT	Course #	Course Title	Units
EPH	717	Integrating Behavior Health Theories and Models	3
EPH	xxx	<i>Methods</i>	3
XXX	xxx	<i>Elective</i>	3
Total =			9 credits

YEAR 1 - Summer

DEPT	Course #	Course Title	Units
EPH	623	Determinants of Health and Health Promotion	3
EPH	810	MS Thesis	1
Total =			4 credits

YEAR 2 - Fall

DEPT	Course #	Course Title	Units
EPH	731	Developing Adapting and Evaluating Interventions	3
EPH	810	MS Thesis	3
Total =			6 credits

YEAR 2 - Spring

DEPT	Course #	Course Title	Units
EPH	732	Intro to Dissemination and Implementation Science	3
EPH	810	MS Thesis	2
Total =			5 credits

Thesis

Please refer to the [DPHS Master of Science Thesis Handbook](#), found on Blackboard in the One-Stop Shop for detailed information regarding thesis requirements and procedures.

Briefly, students are required to complete six credits (EPH 810) that will challenge them to conduct an individual investigation of a current public health problem and demonstrate competency in the development and implementation of a research question related to that problem. Students will work closely with their thesis committee, which will consist of at least three members:

- Committee Chair (DPHS Graduate Faculty research mentor)
- Second Committee member (DPHS Graduate Faculty member)
- Outside Faculty (a faculty member from a UM department outside the student's area of concentration or from outside the University of Miami altogether)

Students are responsible for adhering to the [UM Academic Calendar](#) deadlines. Always refer to the electronic version of the academic calendar as it may be modified as needed. In addition, all thesis deadlines are determined by the Graduate School through the [Electronic Thesis and Dissertations \(ETD\)](#) as stated in the DPHS Thesis Handbook. These deadlines are firm, so please make sure you plan ahead.

Classroom Learning

The primary teaching style in most courses in the MS-PSCH program will be a combination of lectures, seminar discussions, and problem-based learning (i.e., applying the skills and knowledge covered in class). Students will be expected to complete a set of readings for each week of class, and these readings will be discussed in class. Each student will be expected to contribute to class discussion.

Each course will be taught by 1-2 primary faculty member, although guest lectures by other faculty members and outside colleagues will be encouraged. Each course will have at least one exam and several courses will require a class project. *Exams* can be in any format or combination of formats (e.g., multiple choice, essay, short answer). *Projects* will require students to apply their knowledge, either alone or in groups. Examples of major projects include in-class poster sessions, writing grant applications, designing new intervention programs or adapting existing programs, or developing manuscripts for publication. Other details of each course are at the discretion of the instructor.

Faculty

All faculty members within the Department of Public Health Sciences will be eligible to participate in the MS-PSCH program. However, primary faculty will be those in the Division of Prevention Science and Community Health. The DPHS website has an updated listing of [primary](#)

[faculty](#), [secondary faculty](#), and [faculty from the Division of Prevention Science and Community Health](#). Currently, most faculty members in the Division teach at least one course.

LEARNING OBJECTIVES AND PROGRAM COMPETENCIES

INTRODUCTORY PUBLIC HEALTH LEARNING OBJECTIVES AND MSCH PROGRAM COMPETENCIES

Table of Introductory Public Health Learning Objectives for Academic Public Health Master's Degrees (per Council on Education in Public Health (CEPH))

Content	Course number(s) and name(s)^
1. Explain public health history, philosophy and values	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion
2. Identify the core functions of public health and the 10 Essential Services*	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	EPH 617 Introduction to Disease Prevention and Health Promotion EPH 623 Determinants of Health and Health Disparities across the Life Course EPH 732 Implementation and Dissemination Science
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion EPH 732 Implementation and Dissemination Science
6. Explain the critical importance of evidence in advancing public health knowledge	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion EPH 731 Designing and Adapting Preventive Interventions EPH 732 Implementation and Dissemination Science
7. Explain effects of environmental factors on a population's health	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion EPH 623 Determinants of Health and Health Disparities across the Life Course EPH 732 Implementation and Dissemination Science
8. Explain biological and genetic factors that affect a population's health	EPH 617 Introduction to Disease Prevention and Health Promotion EPH 623 Determinants of Health and Health Disparities across the Life Course
9. Explain behavioral and psychological factors that affect a population's health	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion EPH 623 Determinants of Health and Health Disparities across the Life Course EPH 731 Designing and Adapting Preventive Interventions
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	EPH 600 Introduction to the Science and Practice of Public Health EPH 623 Determinants of Health and Health Disparities across the Life Course EPH 731 Designing and Adapting Preventive Interventions
11. Explain how globalization affects global burdens of disease	EPH 600 Introduction to the Science and Practice of Public Health

12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	EPH 600 Introduction to the Science and Practice of Public Health EPH 617 Introduction to Disease Prevention and Health Promotion EPH 717 Integrating Behavioral Health Theories and Models EPH 623 Determinants of Health and Health Disparities across the Life Course EPH 731 Designing and Adapting Preventive Interventions EPH 732 Implementation and Dissemination Science
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Table of MS-PSCH Program Specific Learning Objectives

Key Coverage of Competencies for the Master of Science (MS) in Prevention Science and Community Health	
Competency	Course number(s) and name(s)
1. Apply epidemiologic methods to the measurement and study of prevention science.	EPH 617 Introduction to Disease Prevention and Health Promotion EPH 623 Determinants of Health and Health Disparities across the Life Course
2. Describe the origins, foundations, and standards of prevention science.	EPH 617 Introduction to Disease Prevention and Health Promotion
3. Design and carry out theoretically-grounded research studies that contribute to the literature on risk and protective factors, and identify their mechanisms of influence associated with health and behavior outcomes across the life span.	EPH 717 Integrating Behavioral Health Theories and Models EPH 623 Determinants of Health and Health Disparities across the Life Course
4. Explain evidence-based preventive interventions and how to apply prevention science theories to the design, implementation, adaption, and evaluation of preventive interventions.	EPH 731 Designing and Adapting Preventive Interventions
5. Integrate knowledge of research design, quantitative and qualitative methods, data analysis, and multi-method, multi-agent assessment methods commonly used in prevention science into research activities.	EPH 617 Introduction to Disease Prevention and Health Promotion EPH 698 Thesis Proposal EPH 699 Thesis
6. Communicate research findings and conclusions (written and oral) in a clear and concise manner.	EPH 717 Integrating Behavioral Health Theories and Models EPH 698 Thesis Proposal EPH 699 Thesis
7. Describe the importance of diversity and contextual issues such as culture, identity, ethnicity, gender, sexual orientation, disability, marginalization, poverty, inequity and religion in research and applied activities.	EPH 623 Determinants of Health and Health Disparities across the Life Course

PROGRAM ADMINISTRATION

The administration and direction of the program is under the leadership of the MS-PSCH Program Director, Dr. Sara St. George, and supported by the Interim Division of Prevention Science and Community Health Division Director (Dr. Kathryn McCollister) and the PhD Program Director (Dr. Eric Brown). The MS-PSCH Program Director reports to the Director of the Division of Prevention Science and Community Health (Dr. Kathryn McCollister) and to the Director of Public Health Education (Dr. Viviana Horigian). The MS-PSCH Program Director serves as a member of the Department of Public Health Sciences Graduate Executive Policy Committee (GEPC). The MS-PSCH Program Director will meet with Dr. McCollister at least once per month and with Dr. Lee as needed.

In collaboration with the Department of Public Health Sciences Graduate Programs, the Division of Prevention Science and Community Health will be responsible for recruitment, admission, and initial academic advising of admitted students. The MS-PSCH Program Director will report on the performance of all students in the program at the end of each semester and will oversee the preparation and administration of degree requirements, including establishing committees for the student theses.

The MS-PSCH Program Director will review any complaints from students about the conduct of teaching or other aspects of the graduate program that cannot be resolved satisfactorily between the immediate disputants. If the disputants are not satisfied by the within-Division process, the next step for either will be to make their case to the Director of Graduate Education, the Department of Public Health Sciences Graduate Executive Policy Committee (GEPC), then to the Senior Associate Dean for Graduate Studies, and then to the Dean of the Graduate School if the Associate Dean's decision is appealed.

A full cadre of administrative support staff is already in place within the Department of Public Health Sciences. These individuals have been supporting the Department's other Master's level programs and will be available to support the MS program in Prevention Science and Community Health.

WEBSITE QUICK REFERENCE GUIDE

There are many helpful websites that you can visit, not the least of which is our own DPHS homepage (<http://publichealth.med.miami.edu>). Below are also links to other useful websites that has pertinent information for Master's students:

University of Miami homepage: www.miami.edu

Graduate School website: <http://www.grad.miami.edu/>

Miller School of Medicine's Office of Graduate Studies: <http://www.biomed.med.miami.edu>

U Miami Graduate Bulletin: <https://www.bulletin.miami.edu>