



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman College of Public Health



Academic Curriculum Guide 2018-2019



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What Is Public Health?

The broad mission of public health was defined by the Council on Education for Public Health in 1978 as "enhancing health in human populations through organized community effort." Public health practitioners are concerned with the determinants of disease, disability and premature death, and the planning and organization of appropriate health services, including health education and policy. The aim of public health is to apply scientific, behavioral, social, and technical knowledge to prevent disease and disability, and to promote health by means of organized community effort. Programs of public health train students in these and other disciplines, and help them to practice the coordination of the various fields in the interest of community health.

The Bachelor of Science with a major in Public Health is designed to prepare students to improve the quality of life of individuals and communities with a focus on wellness and prevention of disease. The Master and Doctor of Public Health are professional degrees designed to prepare graduates to solve public health problems as practitioners who can apply a breadth of knowledge as well as expertise and experience in one specific area of public health. Academic programs include Master of Science and Doctor of Philosophy degrees that advance the field of public health with research in various disciplines. The academic programs in MEZCOPH focus on Biostatistics, Epidemiology, Health Behaviors and Environmental Health Sciences. This curriculum guide presents course requirements for the Bachelor, Master's and Doctoral programs in the Mel and Enid Zuckerman College of Public Health (MEZCOPH).

Current students should use this curriculum guide in conjunction with the academic advisors and faculty mentors to design their personal plans of studies. Students interested in attending MEZCOPH will be able to gain knowledge about what their academic experience will include while being a student at MEZCOPH. Completion of each of these programs allows students to take positive steps forward toward increasing their knowledge about public health and to acquire the skills needed to solve public health problems in one or more specific area of public health.



Bachelor of Science with a Major in Public Health

The Bachelor of Science with a major in Public Health is a College-wide degree and, as such, undergraduate teaching faculty come from all MEZCOPH departments.

The Bachelor of Science with a major in Public Health is designed to promote an understanding of health and disease based on public health principles. The primary goal of the program is to prepare students to work in public health to improve the quality of life of individuals and communities. The curriculum provides general knowledge regarding public health principles and practice augmented by concentrated study (subplans) in Environmental and Occupational Health, Health Promotion, Health Systems Theory and Practice, Global Health, and Public Health Practice. Field work provides students with an experience that incorporates classroom learning into public health practice and prepares them for future employment. This program is available in-person on the Tucson campus or in a fully-online format.

The core competencies of the major provide the knowledge and skills needed to conduct public health practice in diverse populations. Particular emphasis is placed on understanding health care delivery in the US and abroad, incorporating epidemiologic and statistical methodologies into public health practice, providing culturally appropriate and effective interventions, identifying health disparities, planning and evaluating health interventions, and understanding the link between nutrition and health.

Acceptance to the public health major is dependent on the candidate's academic aptitude; prior experience in public health demonstrated via community service or public health practice; leadership potential; commitment to underserved areas and populations, and respect for cultural diversity. Admission to the major is by application only and requires a University of Arizona GPA of 2.5 or greater; completion of the pre-health prerequisite courses with a grade of C or higher; a completed major application; a resume or CV; and personal narrative.

Bachelor of Science with a major in Public Health Curriculum (58 units)

Bachelor of Science with a major in Public Health Total Min. Requirement = 120 units



Required Core Courses (37 units: grade of C or higher required)

ENGL 307	Business Writing (3)
	OR ENGL 308 Technical Writing (3)
EPID 309	Introduction to Epidemiology (3)
PHPM 310	Health Care in the US (3)
HPS 350	Principles of Health Education and Health Promotion (3)
EHS 375	Introduction to Environmental & Occupational Health (3)
BIOS 376	Introduction to Biostatistics (3)
PSIO 380	Fundamentals of Human Physiology (4) OR PSIO 201 Anatomy & Physiology I (4)
HPS 387	Health Disparities and Minority Health (3)
HPS 433	Global Health# (3)
HPS 478	Public Health Nutrition# (3)
HPS 493A	Field Work in Public Health# (6)



SUBPLAN UNITS (minimum 12 units required);

Select one subplan option:

Environmental and Occupational Health Subplan

Required:	EHS 484	Fundamentals of Industrial and Environmental Health# (3)
Select 9 units:	HPS 401	Introduction to Mapping for Public Health# (3)
	EHS 418	Introduction to Health Risk Assessment# (3)
	EHS 422	Safety Fundamentals# (3)
	EHS 426	Topics in Environmental Justice# (3)
	EHS 439A	Outbreaks and Environmental Microbiology: Then to Now# (3)
	EHS 489	Public Health Preparedness# (3)

Health Promotion Subplan

Select 12 units:	HPS 400	Contemporary Community Health Problems# (3)
	HPS 401	Introduction to Mapping for Public Health# (3)
	HPS 403	Applications in Health Promotion Behavioral Theories & Health#(3)
	HPS 404	Fundamentals of Evaluation#(3)
	HPS 481	Health Education Intervention Methods#(3)
	HPS 497E	Public Health for Community Wellness#(2)
	HPS 497G	Open Airways for Schools# (1)

Health Systems Theory and Practice Subplan

Select 12 units:	HPS 405	Biology in Public Health Research and Practice# (3)
	PHPM 407	Health Economics and Policy# (3)
	HPS 412	Public Health Approaches to Mental Health Disorders in US# (3)
	PHPM 415	Strategic Planning# (3)
	PHPM 458	Health Care Marketing# (3)

Global Health Subplan

Select 12 units:	HPS 401	Introduction to Mapping for Public Health# (3)
	HPS 404	Fundamentals of Evaluation# (3)
	HPS 416	The World's Food and Health# (3)
	EPID 479	Infections and Epidemics# (3)
	HPS 493C	Global Experience in Public Health# (3)
400-level		Public Health Study Abroad opportunities in China and Europe

Public Health Practice Subplan

Select 12 units:	HPS 404	Fundamentals of Evaluation# (3)
	PHPM 407	Health Economics and Policy# (3)
	PHPM 415	Strategic Planning# (3)
	PHP 421	Introduction to Public Health Law and Ethics# (3)
	HPS 499	Independent Study# (3)

PUBLIC HEALTH ELECTIVE UNITS (minimum 9 units)

HPS 300	Public Health in the 21 st Century (3)
HPS 306	Drugs and Society (3)
HPS 313	Health and Medicine in Classic Antiquity (3)
HPS 322	Health Education Ethical Leadership (3)
HPS 330	Human Sexuality (3)
CPH 399§	Independent Studies (1-4)
HPS 402	Corporate Wellness# (3)
HPS 408	Disabilities and Public Health# (3)
HPS 425	Latino Health Disparities (3)
EHS 426	Topics in Environmental Justice#(3)
HPS 438A	Women's Health in Global Perspective (3)
HPS 449	Family Violence# (3)
PHPM 450	Centuries of Public Health: Sanitation, Sleuthing, and Sex# (2)
HPS 459	Special Topics in Public Health# (1-3)
EPID 479	Infections and Epidemics# (3)
HPS / PHP 487	Feminist Interpretations of Health (3)
CPH 491§	Preceptorship (1-3)
HPS 493B	(Elective) Internship in Public Health# (1-6)
EPID 495	Special Topics in Epidemiology# (1-3)
HPS 497S	Skin Cancer Prevention in the Community Setting# (1-2)
CPH 499§	Independent Studies (1-4)
CPH 498H§	Honors Thesis (3)

Subplan courses may also be used as College of Public Health (CPH) electives.

§ CPH independent study courses can be taken from other programs within the College of Public Health with course prefixes of HPS, BIOS, EPID, PHPM or PHP.

Admission to the major or minor required for enrollment.

Undergraduate Minor in Public Health

A minimum of 18 units are required for the undergraduate minor in Public Health

Admission to the minor requires a minimum 2.5 GPA, and the student's minor GPA, at the time of graduation must be at least a 2.0. Please note that the Public Health minor cannot be added during priority registration. In addition, admission into the minor does not guarantee entry into College of Public Health courses.

Required (9 units)

HPS 178	Personal Health and Wellness (3)
HPS 200	Introduction to Public Health (3)
EPID 309	Introduction to Epidemiology (3)

Electives* (9 units)

HPS 300	Public Health in the 21 st Century
HPS 306	Drugs and Society (3)
HPS 313	Health and Medicine in Classic Antiquity (3)
PHPM 310	Health Care in the US (3)
HPS 322	Health Education and Ethical Leadership (3)
HPS 330	Human Sexuality (3)
HPS 350	Principles of Health Education and Health Promotion (3)
EHS 375	Introduction to Environmental & Occupational Health (3)
BIOS 376	Introduction to Biostatistics (3)
HPS 387	Health Disparities and Minority Health (3)
CPH 399§	Independent Studies (1-4)
HPS 400	Contemporary Community Health Problems# (3)
HPS 401	Introduction to Mapping for Public Health# (3)
HPS 402	Corporate Wellness# (3)
HPS 403	Applications in Health Promotion Behavioral Theories & Health#(3)
HPS 404	Fundamentals of Evaluation (3)
HPS 405	Biology in Public Health Research and Practice# (3)
PHPM 407	Health Economics and Policy#(3)
HPS 408	Disabilities and Public Health# (3)
HPS 412	Public Health Approaches to Mental Health Disorders in the US# (3)
PHPM 415	Strategic Planning# (3)
HPS 416	The World's Food and Health# (3)
EHS 418	Introduction to Health Risk Assessment# (3)
PHP 421	Introduction to Public Health Law and Ethics# (3)
EHS 422	Safety Fundamentals# (3)
HPS 425	Latino Health Disparities (3)
EHS 426	Topics in Environmental Justice# (3)
HPS 433	Global Health# (3)
HPS 438A	Women's Health in Global Perspective (3)
EHS 439A	Outbreaks and Environmental Microbiology: Then to Now# (3)
HPS 449	Family Violence# (3)
PHPM 450	Centuries of Public Health: Sanitation, Sleuthing, and Sex# (2)
PHPM 458	Health Care Marketing# (3)
HPS 459	Special Topics in Public Health# (1-3)

HPS 478	Public Health Nutrition# (3)
EPID 479	Infections and Epidemics# (3)
HPS 481	Health Education Intervention Methods#(3)
EHS 484	Fundamentals of Industrial and Environmental Health# (3)
HPS/PHP 487	Feminist Interpretations of Health (3)
EHS 489	Public Health Preparedness# (3)
CPH 491§	Preceptorship (1-3)
CPH 492§	Directed Research# (1-3)
HPS 493B	(Elective) Internship in Public Health# (1-6)
EPID 495	Special Topics in Epidemiology# (1-3)
HPS 497E	Public Health for Community Wellness# (2)
HPS 497G	Open Airways for Schools# (1)
EPID 497S	Skin Cancer Prevention in the Community Setting# (1-2)
CPH 498§	Honors Thesis# (1-3)
CPH 499§	Independent Studies# (1-4)

*Some elective courses may have additional prerequisites.

§ CPH independent study courses can be taken from other programs within the College of Public Health with course prefixes of HPS, BIOS, EPID, PHPM or PHP.

Contact your minor advisor for enrollment.



Accelerated BS & MPH Environmental & Occupational Health

Kelly Reynolds, PhD, MSPH – **Program Director**

Faculty: Paloma Beamer, PhD; Jefferey Burgess, MD, MS, MPH; Robert Canales, PhD, MS; Stephanie Griffin, PhD, CIH; Philip Harber, MD, MPH; Mary Kay O'Rourke, PhD; Boris Reiss, PhD, CIH; Marc Verhougstraete, PhD

The Environmental Health Sciences Section has developed an accelerated five-year Bachelor of Science to Master of Public Health Degree option for exceptional students.

Students have the potential to experience the breadth of public health in the bachelor's program and focus on gaining environmental and occupational health (EOH) expertise in the Master of Public Health program. The combined, structured degree enables students to carefully choose electives that prepare them for the advanced courses and provide a broader exposure to EOH in 5 years instead of the 6 years that would be required to complete the degrees separately.

EOH specialists focus on the exposure of people to physical, biological and chemical hazards in the environment or workplace and their impact on health. Students can focus on either industrial hygiene or a broader environmental and occupational health track. The accelerated program covers the same information and addresses the same competencies as the two separate degrees. Students can replace elementary level courses in the bachelor program with deeper expertise provided in the master level coursework.

Students apply to the Public Health major after completion of the fourth semester in the undergraduate program with completion of specified courses. Students apply to the combined, accelerated MPH program after completing 75 credit hours of undergraduate work including at least a semester of organic chemistry, calculus and physics. A full year of calculus and organic chemistry is preferred. A GPA of 3.3 or greater during the first three years of the undergraduate curriculum is required. Students are accepted following completion of 90 undergraduate credit hours. Students will begin the MPH curriculum their senior year as an undergraduate.



Accelerated BS/MPH Degree
EOH - Industrial Hygiene or Environmental Occupational Health Concentration
Curriculum and Suggested Course Sequencing

Semester	Course	Credits
Incoming AP Courses Accepted		
	Composition, Calculus, Language, Biology, Chemistry, Physics	
1st Semester (16 undergraduate credits)		
1	ENGL 101 First semester composition	3
1	MATH 125 (or higher) Calculus I	3
1	CHEM 151 Chemistry I	4
1	Tier I General Education Class (individuals and Societies)	3
1	NSC 101 - Introduction to Human Nutrition	3
2nd Semester (16 undergraduate credits)		
2	ENGL 102 Second semester composition	3
2	MATH 129 Calculus II	3
2	CHEM152 Chemistry II	4
2	Tier I General Education Elective (Traditions and Cultures)	3
2	Tier I General Education Elective (Individuals and Societies)	3
Summer (7 undergraduate credits)		
	MCB 181 L and R General Biology	4
	Tier I General Education Elective (Traditions and Cultures)	3
3rd Semester (15 undergraduate credits)		
3	CHEM 241A & CHEM 241B Organic Chemistry	5
3	PSIO 380 Fundamentals of Human Physiology	4
3	HPS 178 Personal Health & Wellness	3
3	Tier II General Education Elective (Arts or Humanities)	3
4th Semester (15 undergraduate credits)		
4	PHYS 102 Introduction to Physics	3
4	EHS 375 Introduction to Environmental & Occupational Health	3
4	HPS 200 Introduction to Public Health	3
4	EPID 309 Introduction to Epidemiology	3
4	Tier II General Education Elective (Individuals and Societies)	3
Summer (6-8 undergraduate credits)		
	Second language (second semester proficiency required)	6-8
Submit application to Public Health Major during the 4th semester or summer term		

Semester	Course	Credits
5th Semester (12-18 undergraduate credits)		
5	PHPM 310 Health Care in the US	3
5	HPS 350 Principles of Health Education	3
5	Public Health Electives	6
5	General Elective (check with Advisor about how many units needed)	0-6
Take GRE during the summer term or 5th semester; apply for admission to the MPH with a 3.3 minimum GPA during the 6th semester.		
6th Semester (15 undergraduate credits)		
6	HPS 433 Global Health	3
6	HPS 478 Public Health Nutrition	3
6	ENGL 307 or ENGL 308 Business Or Technical Writing	3
6	HPS 493A Field Work in Public Health (internship)	6
7th Semester (12 graduate credits – counted towards both programs)		
7	EPID 573A Epidemiology	3
7	BIOS 576A Biostatistics	3
7	EHS 502 Environmental Monitoring Methods	3
7	EHS 584 Fundamentals of Industrial Hygiene & Environmental Health	3
Student graduates with a BS with a major in Public Health (minimum 120 credit hours)		
8th Semester (13 graduate credits)		
8	PHPM 574 Public Health Policy & Management	3
8	EHS 553 Toxicology & Chemical Exposures (or EHS track approved course)	3
8	EHS 655 Control of Occupational Exposures (or EHS track approved course)	3
8	EHS 575 Environmental & Occupational Health	3
8	EHS 696R Environmental & Occupational Health Seminar	1
8	Internship Preparation Training	0
Summer (2 graduate credit hours) - Internship (EHS 909 1 credit) and Research (EHS 900 1 credit)		
9th Semester (9 graduate credits)		
9	HPS 577 Sociocultural & Behavioral Aspects of Public Health	3
9	EHS 522 Safety Fundamentals (or EHS track approved course)	3
9	EHS 696R Environmental & Occupational Health Seminar	1
9	HPS 900 Thesis	2
10th Semester (9 graduate credits)		
10	EHS 653 Applied Exposure Assessment	3
10	EHS 510 Physical Exposures (or EHS track approved course)	3
10	EHS 696R Environmental & Occupational Health Seminar	1
10	HPS 909 Internship & Report	2
Student Graduates with MPH (total BS + MPH = 155 Credit Hours including 2 internships)		

Master of Public Health

The Master of Public Health (MPH) degree is designed to be an interdisciplinary, graduate, professional degree in public health. The program provides opportunities for students to obtain broad knowledge and basic skills in the core areas of public health. Students are able to acquire proficiency in one or more specialized areas through advanced coursework, and gain experience in applying advanced knowledge to the solution of actual health problems in community settings during internship training.

The mission of the MPH program is to prepare students to assume public health leadership roles in the identification of community health problems, and in the planning, implementation and evaluation of programs and policies essential for the promotion of health and the alleviation of illness and disease. The MPH program is designed to meet the particular needs of the Southwestern United States, with emphasis on rural and urban medically underserved populations, including Hispanics, Native Americans, and other ethnic minority populations.

The MPH Program blends the strengths and experiences of the medical and health-related programs of The University of Arizona and the community health agencies of Arizona to provide a program of sufficient breadth and depth to offer high quality community-oriented graduate public health education.



Master of Public Health (MPH) Degree Concentrations

Department of Epidemiology and Biostatistics

- Biostatistics
- Epidemiology
- One Health



Department of Community, Environment and Policy

- Environmental and Occupational Health with tracks in Environmental and Occupational Health (EOH) & Industrial Hygiene (IH)
- Public Health Policy and Management

Department of Health Promotion Sciences

- Family and Child Health with tracks in Global Health and Maternal & Child Health
- Health Behavior Health Promotion

Division of Public Health Practice and Translational Research

- Health Services Administration (Phoenix & Tucson campuses)
- Public Health Practice (Based at the Phoenix campus)

The UA Zuckerman College of Public Health offers a MPH program in which students acquire a sound academic background for competent practice in the field of public health. The MPH program is a two year program for full-time students; part-time students may take up to six years to complete the program. MPH students are required to select one of the nine concentration areas listed below. Dual degree options are also available, including the MD/MPH with the College of Medicine, the JD/MPH with the College of Law, the MBA/MPH with Eller College of Management, the PharmD/MPH with the College of Pharmacy, the MPH/MA in Latin American Studies, and the MPH/MS in Mexican American Studies.

Biostatistics

The Biostatistics area of study's educational objective is to prepare individuals to apply statistical methods to the solution of problems encountered in such fields as public health, medicine, nursing, pharmacy and dentistry. They collaborate with scientists and investigators in nearly every area related to health, and have made major contributions to our understanding of diseases such as AIDS, cancer, and coronary heart disease.

Environmental and Occupational Health

The Environmental and Occupational Health area of study prepares individuals to evaluate and control health risks posed by chemical and biological contaminants and physical exposures (noise, heat and radiation) in occupational and community environments. Those interested in industrial hygiene may be eligible to receive funds through the NIOSH training program. Faculty members have experience in industrial hygiene, occupational and environmental health, safety, ergonomics, toxicology, microbiology, exposure modeling, occupational and preventive medicine, environmental sciences, engineering and epidemiology.

Epidemiology

Epidemiology is a fundamental science of public health with a major focus on health problems in communities, groups, or aggregates of people. Individuals who choose this concentration will have the opportunity to acquire knowledge, skills and experiences for measuring and studying the distributions, characteristics, causes, and prevention of disease, disability, and premature death in humans. The Epidemiology concentration prepares students to work proficiently with tasks related to epidemiological study design, data collection, data analysis, and study presentations in public health.

Family and Child Health

The Family and Child Health (FCH) area of study provides students with the history and current status of the socioeconomic, cultural, political and physiological issues that affect women, children and families. Students entering the FCH concentration must choose a plan of work in one of two specialized areas: maternal and child health or global health. Course offerings include topics such as maternal health, adolescent health, family violence, mental health, global health, nutrition, and maternal and child health epidemiology.

Health Behavior Health Promotion

The Health Behavior Health Promotion (HBHP) concentration is founded on a philosophy of health education, health promotion, and disease prevention to improve the quality of life of individuals, families and communities. HBHP focuses on sociocultural factors that influence health and health behavior; scientific and theoretical bases for planning, implementing, and evaluating effective public health education, health promotion and disease prevention programs; and the goal of facilitating behavior change for healthy life.

Health Services Administration (*Tucson and Phoenix Campuses*)

The Health Services Administration (HSA) concentration is an unique combination of public health and health care administration courses, which will provide individuals with the tools they need to understand the multifaceted administrative and business aspects of health care. The Health Services Administration curriculum is comprised of specifically targeted courses, with a goal to graduate highly qualified health care administrators.

One Health

The One Health curriculum model recognizes that multi-disciplinary efforts at the intersection between humans, animals and their respective environments are needed to solve complex diseases and public health concerns. These approaches to understanding disease can be visible at the local level but also are needed at a global level. The MPH in One Health will train students in the theory and application of utilizing One Health approaches to address complex public health challenges. Expertise is drawn from all three MEZCOPH departments as well as Colleges and Schools across the University.

Public Health Policy and Management

The Public Health Policy and Management area of study prepares leaders of public and private health systems to manage effectively and to create and implement policies that promote the public's health. The concentration develops skills in management and leadership, policy analysis and formulation, strategic and financial planning, health services administration and evaluation for all levels of practice, including local/community, state, national and international settings. Consistent with the College's focus on community participation and development, the

curriculum emphasizes community partnership in all aspects of public health policy development and program management.

Public Health Practice (*Based at the Phoenix Campus*)

The MPH in Public Health Practice prepares students to work effectively as part of multidisciplinary teams to develop, manage and evaluate public health programs that are appropriate for decreasing health disparities. Coursework includes: core areas of public health and skills in the administration and fiscal management of programs within diverse populations.

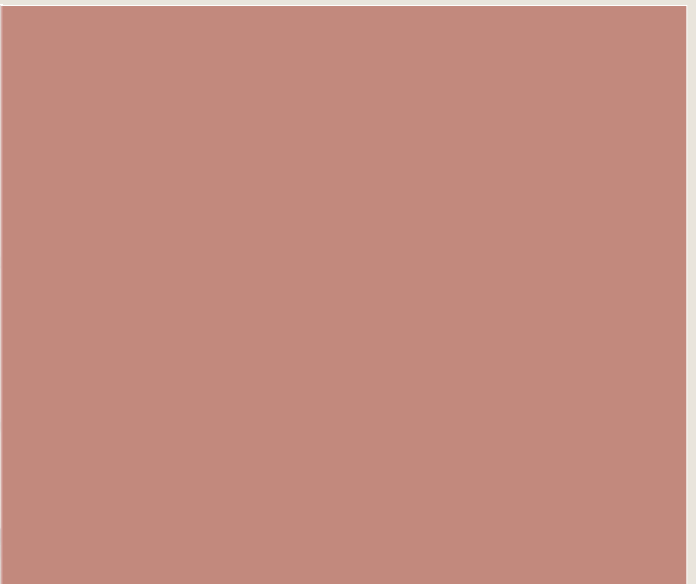
MD/MPH

The emphasis of the MD/MPH Dual Degree is on Clinical Leadership; it is anticipated that graduates will be leaders in a wide variety of clinical and public health settings. The MD/MPH program is designed to give students exposure to the public health, prevention and clinical issues they will face, and provide a framework for problem solving and implementing effective health programs.



Master of Public Health Degree Requirements

The Master of Public Health (MPH) degree is comprised of core courses, required concentration courses, elective courses, and an internship. Each student will also be required to produce a comprehensive, analytical, problem solving report integrating the in-class learning with a portfolio that includes two products from their applied practice experiences. One product must be an internship experience. An oral presentation of the material before a student and faculty colloquium, reporting on activities during the internship, and relating those activities to broader public health issues is required. Additionally, all MPH students must participate in interprofessional education (IPE) programs that are available through various MEZCOPH courses, and the Arizona Health Sciences Center's IPE activities. Documentation of IPE participation is required for graduation. Detailed information on the requirements for each concentration area follows.



Department of Epidemiology and Biostatistics

Master of Public Health/Biostatistics

Edward J. Bedrick, PhD – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>

The MPH program in Biostatistics is offered by the [Department of Epidemiology and Biostatistics](#). The educational objective of the MPH degree in Biostatistics is to prepare individuals to work effectively as biostatisticians in a variety of public health, epidemiological and clinical research settings. Candidates for admission may come from medical and public health backgrounds. Applicants should possess 1) a demonstrated interest and/or experience in the area of biostatistics, 2) in the case of a deficient overall GPA, evidence that recent performance significantly exceeds the past average, and 3) evidence of personal qualities that suggest the ability to commit and succeed in the course of studies. While courses in statistics are not required as prerequisites, students should have had college level calculus and/or linear algebra.

MPH Biostatistics Total Minimum Credit Requirements (42 units)

Required Core Courses (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
BIOS 580	Integrated Public Health Learning Experience (1)
	Internship Preparation Workshop (required ; non-credit)
	Interprofessional Education Activities (documentation required ; non-credit)

Required Biostatistics Courses (17 units)

BIOS 576B	Biostatistics for Research (3)
BIOS 576C	Applied Biostatistics Analysis (3)
BIOS 576D	Data Management and the SAS Programming Language (3)
BIOS 647	Analysis of Categorical Data (3)
BIOS 909	Master's Report "Internship" (5)

Elective Courses (minimum 9 units) – Approved by Faculty Mentor

At least 6 units from the following courses:

BIOS 648	Analysis of High Dimensional Data (3)
BIOS 675	Clinical Trials and Intervention Studies (3)
BIOS 684	General Linear and Mixed Effects Models (3)
BIOS 686	Survival Analysis (3)

Other elective courses:

EPID 677	Genetic Association Studies (3)
BIOS 685	Special Topics in Biostatistics (3)
STAT 571A	Advanced Statistical Regression Analysis (3)
STAT 571B	Design of Experiments (3)
STAT 675	Statistical Computing (3)

Recommended Course Sequencing

First Year

Fall Semester (9 units)

BIOS 576A*	Biostatistics in Public Health (3)
EPID 573A*	Basic Principles of Epidemiology (3)
EHS 575*	Environmental & Occupational Health (3)

Spring Semester (9 units)

BIOS 576B	Biostatistics for Research (3)
PHPM 574*	Public Health Policy & Management (3)
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)
	Internship Preparation Workshop (required ; non-credit)

Second Year

Fall Semester (12 units)

BIOS 576C	Applied Biostatistics Analysis (3)
Elective(s)	(approved by Faculty Mentor) (6)
BIOS 576D	Data Management and the SAS Programming Language (3)

Spring Semester (12 units)

BIOS 647	Analysis of Categorical Data (3)
BIOS 909 §	Master's Report "Internship" (5)
Elective	(approved by Faculty Mentor) (3)
BIOS 580	Integrated Public Health Learning Experience (1)

* MPH required core courses are offered fall & spring semesters, allowing flexibility.
The modality and number of offerings may vary by semester and are subject to change.

§ **BIOS 909 Master's Report "Internship" - Prerequisite Courses:** At least 3 MPH core courses and BIOS 576A and BIOS 576B. BIOS 909 may be taken in one or more semesters and the credits may be split across semesters. **Note:** The final internship report may not be completed until the semester following the completion of all five MPH core classes. All five core courses must be completed prior to the student's final semester.



Department of Epidemiology and Biostatistics

Master of Public Health/Epidemiology

Kacey Ernst, PhD, MPH – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>

The MPH in Epidemiology is offered by the [Department of Epidemiology and Biostatistics](#). Epidemiology is a fundamental science of public health with a major focus on health problems in communities, groups, or aggregates of people. The Epidemiology concentration curriculum provides systematic training in epidemiological principles, methods, and practices through constructive coursework and an internship. Individuals who choose the epidemiology concentration will have the opportunity to acquire knowledge, skills and experiences for measuring and studying the distributions, characteristics, causes, and prevention of disease, disability, and premature death in humans.

Students accepted into this discipline should have a good background in the biological sciences and mathematics. In addition to the general admission requirements for the MPH program, other factors considered in the determination of a candidate's potential for success in the epidemiology concentration area are long range goals and commitment to both public health and epidemiology; experience/interest in applying epidemiological principles to public health; and work and volunteer experience in epidemiology.

MPH Epidemiology Total Minimum Credit Requirements (42 units)

Required Core Courses (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
EPID 580	Integrated Public Health Learning Experience (1)
	Internship Preparation Workshop (required ; non-credit)
	Interprofessional Education Activities (documentation required ; non-credit)

Required Epidemiology Courses (26 units)

EPID 573B	Epidemiologic Methods (3)
EPID 573C	Advanced Epidemiology (3)
BIOS 576B	Biostatistics for Research (3)
EPID 596D	Public Health Experience – Student Epidemiology Response Team (2)
EPID 696A	Epidemiology Seminar (1 unit – 2 times)
EPID 909	Master's Report "Internship" (4)

Complete 3 Selective Epidemiology courses (minimum 9 units) from the following courses:

EPID 615A	Cancer Epidemiology & Prevention (3)
EPID 630	Maternal and Child Health Epidemiology (3)
EPID 645	Nutritional Epidemiology (3)
EPID 646	Measurement Issues in Epidemiology (3)
EPID 660	Infectious Disease Epidemiology (3)
EPID 670	Chronic Disease Epidemiology (3)
EPID 676	Spatial Epidemiology (3)
EPID 677	Principles of Genetic Association Studies (3)
EPID 679	One Health Applications and Practice (3)

Recommended Course Sequencing

First Year

Fall Semester (12 units)

- EPID 573A* Basic Principles of Epidemiology (3)
BIOS 576A* Biostatistics in Public Health (3)
PHPM 574* Public Health Policy & Management (3)
or EHS 575* Environmental & Occupational Health (3)
HPS 577* Sociocultural & Behavioral Aspects of Public Health (3)

Spring Semester (13 units)

- EPID 573B** Epidemiologic Methods (3)
BIOS 576B*** Biostatistics for Research (3)
EHS 575* Environmental & Occupational Health (3)
or PHPM 574* Public Health Policy & Management (3)
EPID 6xx Selective Epidemiology Course # 1: 645, 660+, 670, 676, 677 (3)
EPID 696A** Epidemiology Seminar (1)
Internship Preparation Workshop (**required**; non-credit)

Summer Semester (1-2 units)

- EPID 909 § Master's Report "Internship" (1-2; typically 1)
To conduct the internship, you must be enrolled.



Second Year

Fall Semester (6- 9 units)

- EPID 573C*** Advanced Epidemiology (3)
EPID 6xx Selective Epidemiology Course #2: 615 (odd yrs.) , 630, 646 (even yrs.) (3) **Or**
EPID 596D** Public Health Experience – Student Epidemiology Response Team (2)
EPID 696A** Epidemiology Seminar (1)
EPID 909 § Master's Report "Internship" (0-2; typically 0)

Spring Semester (7-11 units)

- EPID 6xx Selective Epidemiology Course #3: 645, 660+, 670, 676, 677 (3)
EPID 6xx Selective Epidemiology Course (3) **Or**
EPID 596D** Public Health Experience – Student Epidemiology Response Team (2)
EPID 696A** Epidemiology Seminar (1)
EPID 909 § Master's Report "Internship" (1-3; often 3)
EPID 580 Integrated Public Health Learning Experience (1)

*MPH required core courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change.

**This course is offered both fall and spring semesters

*** This course only offered in this specific semester; **not** in both fall and spring semesters.

§ **EPID 909 Master's Report "Internship"– Prerequisite Courses:** At least 3 MPH core courses, EPID 573B, and BIOS 576B before starting internship & all 5 MPH core courses must be completed before your last semester, when you finalize writing your Internship Report. EPID 909 typically is taken in multiple semesters with the credit hours split across semesters.

+ **NOTE:** Students planning an infectious disease related MPH Internship are encouraged to take EPID 660 spring year 1. EPID 660 and HPS 577 are offered during the same time slot during the spring semester; plan accordingly.

Students who require full time graduate status for loan/scholarship disbursement may need to take more units than the sequencing recommends.

Department of Epidemiology and Biostatistics

Master of Public Health/One Health

Kristen Pogreba Brown – *One Health Program Director, PhD, MPH*

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>

The MPH in One Health is offered as a MEZCOPH interdisciplinary concentration administered through the [Department of Epidemiology and Biostatistics](#). The One Health paradigm recognizes that multi-disciplinary efforts at the intersection between humans, animals and their respective environments are needed to solve complex diseases and public health concerns. These approaches to understanding disease can be visible at the local level but also are needed at a global level. The MPH in One Health will train students in the theory and application of utilizing One Health approaches to address complex public health challenges. Expertise is drawn from all three MEZCOPH departments as well as Colleges and Schools across the University.

The One Health curriculum focuses on the interconnectedness of health among human, animal and environmental systems and how to work within a multi-disciplinary team. The most important aspects of working under this model are Collaboration and Partnership; Informatics and Data Management; Culture, Beliefs, Values and Ethics; Leadership; Management; Policy, Advocacy and Regulation; and Systems Thinking – all of which are embedded concepts and competencies in our core MPH courses, required courses and various recommended electives.

MPH One Total Minimum Credit Requirements (42 units)

Required Core Courses (16 units) *

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
EPID 580	Integrated Public Health Learning Experience (1)
	Internship Preparation Workshop (required ; non-credit)
	Interprofessional Education Activities (documentation required ; non-credit)

Required Courses (14 units)

EPID 660	Infectious Disease Epidemiology (3) ***
ACBS 570	Interactions of Animals, Humans, and Ecosystems (One Health) *** (3)
EPID 679	One Health Applications and Practice (F)(3)***
EPID 596D	Public Health Experience – Student Epidemiology Response Team (SAFER) (2)**
EPID 909	Master’s Report “Internship” (3) §

Required Selectives (12 units) – Students must take **at least one** course from each of the four areas: **HUMAN, ANIMAL/PATHOGEN, ENVIRONMENT and METHODS**. The list of required selectives can be found on the College of Public Health’s [website](#) under the One Health MPH page.

Recommended Course Sequencing



First Year

Fall Semester (12 units)

EPID 573A Basic Principles of Epidemiology (3)*
BIOS 576A Biostatistics in Public Health (3) *
PHPM 574 Public Health Policy & Management (3)* **or**
EHS 575 Environmental & Occup Health (3)*
HPS 577 Sociocultural & Behav Aspects of Public Health (3)*

Spring Semester (11 units)

EPID 660 Infectious Disease Epidemiology*** (3) **or**
ACBS 570 Interactions of Animals, Humans, and Ecosystems (One Health) *** (3)
EPID 596D SAFER (2)**
PHPM 574 Public Health Policy & Management (3)* **or**
EHS 575 Environmental & Occup Health (3)*
One Health Selective - Human, Animal, Enviro **or** Methods (3)
Internship Preparation Workshop (no credit)

Summer Session (0-4 units)

EPID 909 Master's Report "Internship" (1-2 units; typically 1 unit) §
(to conduct the internship you must be enrolled)
One Health Selective - Human, Animal, Enviro **or** Methods (3) – **optional**

Second Year

Fall Semester (9-12 units)

EPID 679 One Health Applications and Practice*** (3)
One Health Selective – Human, Animal, Enviro **or** Methods (3)
One Health Selective – Human, Animal, Enviro **or** Methods (3)
EPID 909 Master's Report "Internship" (0-2, typically 0) §
EPID 580 Integrated Public Health Learning Experience (1) **or**
(or EPID 580 can be taken in the Spring of the 2nd year)

Spring Semester (9-12 units)

EPID 660 Infectious Disease Epidemiology*** (3) **or**
ACBS 570 Interactions of Animals, Humans, and Ecosystems (One Health) *** (3)
One Health Selective – Human, Animal, Enviro **or** Methods (3)
One Health Selective – Human, Animal, Enviro **or** Methods (3)
EPID 909 Master's Report "Internship" (1-3, often 3) §

* MPH required core courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change. All five core courses must be completed prior to the student's final semester.

** This course is offered both fall and spring semesters

*** This course only offered in this specific semester not in both fall and spring.

& Students planning an infectious disease related MPH Internship are encouraged to take EPID 660 spring year 1.

§ **EPID 909 Master's Report "Internship" – Prerequisite Courses:** At least 3 MPH core courses and EPID 596D before starting Internship & all 5 MPH core courses completed before your last semester when you finalize writing your Internship Report.

EPID 909 typically is taken in multiple semesters.

NOTE: EPID 660 and HPS 577 are offered during the same time slot in spring, so plan accordingly.

Department of Community, Environment and Policy

Master of Public Health/Environmental and Occupational Health

Kelly Reynolds, PhD, MSPH – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/cep/ehs/faculty>

The MPH degree in Environmental and Occupational Health (EOH) is offered by the [Department of Community, Environment and Policy](#). There are two tracks available for students to pursue: Environmental and Occupational Health (EOH) and the ABET accredited Industrial Hygiene (IH) track. Both tracks prepare individuals to evaluate and control health risks posed to communities and workers by chemical/biological contaminants and physical exposures.

Our faculty has expertise in: occupational safety, toxicology, occupational medicine, ergonomics, industrial hygiene, epidemiology, microbiology, environmental science, environmental modeling and engineering, exposure and risk assessment. As part of the coursework, students perform both an internship and a research project. Students will work with a faculty mentor to develop an individualized plan of study that best meets personal professional goals.

The EOH track provides flexibility in selection of electives and emphasis areas, and requires 42 credit hours for completion. The IH track provides a greater focus on worker protection. Additional courses are required and the track requires 45 credit hours. Those interested in worker protection may be eligible to receive funds through the NIOSH training program.

Students selecting the EOH concentration area should have a strong background in the basic sciences. In addition to the general admission requirements for the MPH, inorganic chemistry is required for admission to the EOH track, and organic chemistry is highly recommended. Students interested in the [MPH-Industrial Hygiene track](#) must have one year of calculus, one year of inorganic chemistry, one semester of organic chemistry and one semester of physics, in addition to the general MPH admission requirements. Additional coursework is required for the ABET accredited IH track.

MPH Environmental and Occupational Health - Total Minimum Credit Requirements

- ❖ **Environmental and Occupational Health (EOH) Track (42 units)**
- ❖ **Industrial Hygiene (IH) Track (45 units)**

Required Core Courses for both tracks (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
EHS 580	Integrated Public Health Learning Experience (1)
	Internship Preparation Workshop (required; non-credit)
	Interprofessional Education Activities (documentation required; non-credit)

Required EOH Courses for both tracks (17 units)

EHS 502	Environmental Monitoring and Analysis (3)
EHS 584	Fundamentals of Industrial and Environmental Health (3)
EHS 653	Applied Exposure Assessment (3)
EHS 696R	Environmental & Occupational Health Seminar (1 unit – 2 times)
EHS 900	Research – EOH or IH (3)
EHS 909	Master's Report "Internship" (3)

Required Courses for the Industrial Hygiene (IH) Track (12 units)

EHS 510	Physical Exposures (3)
EHS 522	Safety and Ergonomic Fundamentals (3)
EHS 553	Toxicology and Chemical Exposures (3)
EHS 655	Control of Occupational Exposures (3)

Elective Courses for the Environmental and Occupational Health (EOH) Track (Minimum 9 units)

EHS 510	Physical Exposures (3)
EHS 518	Introduction to Human Health Risk Assessment (3)
EHS 522	Safety and Ergonomic Fundamentals (3)
EHS 539	Introduction to Environmental Health Policy (3)
EHS 553	Toxicology and Chemical Exposure (3)
EHS 583	Environmental & Occupational Diseases (3)
EHS 589	Public Health Preparedness (3)
EHS 604	Modeling Exposures to Environmental Hazards (3)
EHS 655	Control of Occupational Exposures (3)

(In addition, other cross campus courses may be used as EOH electives; approved by Faculty Mentor)



MPH - Environmental and Occupational Health – *EOH Track* Recommended Course Sequencing (even year program entry)

First Year

Fall Semester (13 units)

EHS 502 Environmental Monitoring & Analysis (3)
EPID 573A* Basic Principles of Epidemiology (3)
BIOS 576A* Biostatistics in Public Health (3)
EHS 584 Fundamentals of Industrial & Environmental Health (3)
EHS 696R Environmental & Occupational Health Seminar (1)

Spring Semester (9 units)

PHPM 574* Public Health Policy and Management (3)
EHS 575* Environmental & Occupational Health (3)
EHS 653 Applied Exposure Assessment (3) §
EHS 696R Environmental & Occupational Health Seminar (0)
Internship Preparation Workshop (**required**; non-credit)

Summer Session following Year 1:

#Begin EHS 909 Master's Report "Internship" and/or EHS 900 EOH Research (up to 2 units)

Second Year

Fall Semester (9 units)

HPS 577* Sociocultural & Behavioral Aspects of Public Health (3)
EHS 696R Environmental & Occupational Health Seminar (1)
EHS 900 Complete EOH Research from Summer Session (2)
Elective Course - Approved by Faculty Mentor @ (3)

Spring Semester (9 units)

EHS 580 Integrated Public Health Learning Experience (1)
EHS 696R Environmental & Occupational Health Seminar (0)
Elective Course - Approved by Faculty Mentor @ (3)
Elective Course - Approved by Faculty Mentor @ (3)
EHS 909# Master's Report "Internship" (2)

* MPH required core courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change.

@Contact your Faculty Mentor for a list of **Elective courses** appropriate to your interest area.

§Make sure you consider course delivery by year (**some courses only have even or odd year offerings**).

#**EHS 909 Internship** may not be initiated until a minimum of 1 core class has been completed (which must include BIOS 576A) plus EHS 502 and EHS 584.

Note: The final internship report may not be completed until the semester following the completion of all five MPH core courses. **All five MPH core courses must be completed prior to the student's final semester.**

MPH - Environmental and Occupational Health – *Industrial Hygiene Track* Recommended Course Sequencing (even year program entry)

First Year

Fall Semester (13 units)

EHS 502	Environmental Monitoring & Analysis (3)
EPID 573A*	Basic Principles of Epidemiology (3)
BIOS 576A*	Biostatistics in Public Health (3)
EHS 584	Fundamentals of Industrial & Environmental Health (3)
EHS 696R	Environmental & Occupational Health Seminar (1)

Spring Semester (12 units)

PHPM 574*	Public Health Policy and Management (3)
EHS 575*	Environmental & Occupational Health (3)
EHS 653 §	Applied Exposure Assessment (3)
EHS 553 §	Toxicology and Chemical Exposure (3)
EHS 696R	Environmental & Occupational Health Seminar (0)
Internship Preparation Workshop (required ; non-credit)	

Summer Session following Year 1:

#Begin EHS 909 Master's Report "Internship" and/or EHS 900 Research (up to 2 units)

Second Year

Fall Semester (9 units)

EHS 522	Safety and Ergonomic Fundamentals (3)
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)
EHS 696R	Environmental & Occupational Health Seminar (1)
EHS 900	Complete EOH Research from Summer Session (2)

Spring Semester (9 units)

EHS 510 §	Physical Exposures and Ergonomics (3)
EHS 580	Integrated Public Health Learning Experience (1)
EHS 655 §	Control of Occupational Exposures (3)
EHS 696R	Environmental & Occupational Health Seminar (0)
EHS 909 #	Master's Report "Internship" (2)

* MPH required core courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change.

§ Make sure you consider course delivery by year (**some courses only have even or odd year offerings**).

EHS 909 Internship may not be initiated until a minimum of 1 core class has been completed (which must include BIOS 576A) plus EHS 502 and EHS 584.

Note: The final internship report may not be completed until the semester following the completion of all five MPH core courses. **All five MPH core courses must be completed prior to the student's final semester.**

Department of Community, Environment and Policy

Master of Public Health/Public Health Policy and Management

Joe Gerald, MD, PhD – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/cep/primary-faculty>

The MPH in Public Health Policy and Management is offered by the [Department of Community, Environment and Policy](#). The Public Health Policy and Management concentration prepares MPH students to fill leadership roles in the public or private sector, craft and implement policies that improve the health and well-being of specific populations, and manage public health programs including those targeting the unique populations residing in the Southwest. Graduates are expected to competently:

- use evidence-based concepts to critique the financing and delivery of medical services in the United States and to analyze the impact of health system reform on efficiency, equity, and population health.
- provide leadership in public and private organizations, manage programs and projects, and utilize critical thinking, systems thinking and self-reflection to resolve technical problems, ethical challenges and interpersonal conflicts.
- construct and interpret budgets, apply accepted financial concepts and analyze the fiscal status of public health, for-profit and non-profit health care organizations.
- describe the state and federal processes that govern the delivery of health services, analyze the impact of legislative and regulatory proposals on population health, and create products that inform others about contemporary health policy issues.
- collaborate with local advocacy groups to critically analyze public health problems, formulate legislative solutions and develop evidence-based justifications to secure bipartisan support.

The PHPM concentration places a strong emphasis on the following factors to determine a candidate's potential for success:

- demonstrated interest in improving the health and well-being of vulnerable populations including the rural, border and indigenous populations of the Southwest.
- a commitment to increasing public health resources, improving availability of health care services and fostering greater self-determination among individuals and communities.
- ability to acquire and use knowledge as evidenced by academic achievement in the classroom and on standardized examinations.
- ability to effectively communicate with others verbally and in writing.
- interest in health policy development and evidenced-based decision-making as evidenced by formal coursework and/or experience in health economics, health outcomes, health services administration or quality-improvement.

MPH PHPM Minimum Credit Requirements (42 units)

Required Core Courses (16 units)



EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
PHPM 580	Integrated Public Health Learning Experience (1)
Internship Preparation Workshop (<i>required</i> ; non-credit)	
Interprofessional Education Activities (<i>documentation required</i> ; non-credit)	

Required PHPM Courses (12 units)

PHPM 510	The US Health Care System (3)
PHPM 567	Public Health Leadership & Management (3)
PHPM 569	Fundamentals of Health Budgeting and Financial Management (3)
PHPM 617	Advanced Public Health Policy Analysis (3)

Required PHPM Experiential Learning Courses (6 units)

PHPM 696P	Public Health Policy and Management Field Seminar (2)
PHPM 909 [‡]	Master's Report "Internship" (3)
	Service Learning Course (1)

Elective Courses (8 units) – Approved by Faculty Advisor

Recommended Course Sequencing

First Year

<u>Fall Semester:</u>	(12 units)
PHPM 510	The US Health Care System (3)
EPID 573A [†]	Basic Principles of Epidemiology (3)
PHPM 574 [†]	Public Health Policy & Management (3)
HPS 577 [†]	Sociocultural & Behavioral Aspects of Public Health (3)

<u>Spring Semester:</u>	(10 units)
PHPM 567	Public Health Leadership & Management (3)
BIOS 576A [†]	Biostatistics in Public Health (3)
Any 597 [#]	Service Learning Course (1)
Elective	Course Approved by Faculty Advisor (3)
Non-credit	Internship Preparation Workshop

Second Year

<u>Fall Semester:</u>	(11 units)
PHPM 569	Fundamentals of Health Budgeting & Financial Management (3)
EHS 575 [†]	Environmental & Occupational Health (3)
PHPM 909 [‡]	Master's Report "Internship" (3)
Elective	Course Approved by Faculty Advisor (2)

<u>Spring Semester:</u>	(9 units)
PHPM 617	Advanced Public Health Policy Analysis (3)
PHPM 696P	Public Health Policy and Management Field Seminar (2)
PHPM 580	Integrated Public Health Learning Experience (1)
Elective	Course Approved by Faculty Advisor (3)

† All core courses are offered during the fall and spring semesters allowing greater flexibility in course sequencing than shown above; however, PHPM 574 Public Health Policy and Management should be taken during the first enrolled semester. The modality of instruction (in-person and on-line) of core courses varies semester-to-semester and is subject to change.

Service Learning courses, indicated by the course number 597, are offered during all semesters and can be taken from any educational unit within the college.

‡ The Applied Learning Experience is a self-directed activity designed by the student in collaboration with a community-preceptor and a faculty advisor. Students are expected to apply their newly gained competencies to a practical problem within their chosen discipline in a field-based setting. Students with more involved projects may enroll in up to 6 credits distributed across 2 or more semesters.

All five MPH core courses must be completed prior to the student's final semester.



Department of Health Promotion Sciences

Master of Public Health/Family and Child Health

Velia Leybas Nuño, PhD, MSW – **Program Director**

Faculty: <https://publichealth.arizona.edu/departments/hps/primary-faculty>

The MPH degree in Family and Child Health is offered by the [Department of Health Promotion Sciences](#). The Family and Child Health (FCH) concentration provides students a curriculum that addresses the history and current status of the socioeconomic, cultural, political and physiological issues that affect the health of women, children, and families. Students entering the FCH concentration must choose a plan of work in one of two specialized areas: Maternal and Child Health (MCH) or Global Health. Each student, under the guidance of a faculty mentor, will develop an individualized plan of study for his or her specialized area of interest.

In addition to the general admission requirements for the MPH Program, factors considered in the determination of a candidate's potential for success in the FCH concentration include work or volunteer experience with underserved populations. The FCH concentration encourages people with a variety of professional and academic backgrounds to apply. Our graduates include nurses, nutritionists, social workers, teachers and physicians.

MPH Family Child Health Total Minimum Credit Requirements

❖ **Maternal Child Health Track (42 units)**

❖ **Global Health Track (42 units)**

Required Core Courses (16 units)

EPID 573A Basic Principles of Epidemiology (3)
PHPM 574 Public Health Policy and Management (3)
EHS 575 Environmental and Occupational Health (3)
BIOS 576A Biostatistics in Public Health (3)
HPS 577 Sociocultural and Behavioral Aspects of Public Health (3)
HPS 580 Integrated Public Health Learning Experience (1)
Internship Preparation Workshop (**required**; non-credit)
Interprofessional Education Activities (**documentation required**; non-credit)

Maternal and Child Health Track Requirements:

Required MCH Courses (19 units)

HPS 586 Maternal and Child Health (3)
EPID 630 Maternal and Child Health Epidemiology (3)
HPS 696H Maternal & Child Health/Public Health Seminar (1)
HPS 588 Adolescent Health (3)
OR HPS 549 Family Violence (3)
OR HPS 512 Public Health Approach to Mental Health Disorders in the U.S. (3)
One Planning and/or Evaluation Course (from approved list – consult with Faculty Mentor) (3)
Select Two 597 Service Learning Courses (2) §
HPS 909 Master's Report "Internship" (4)

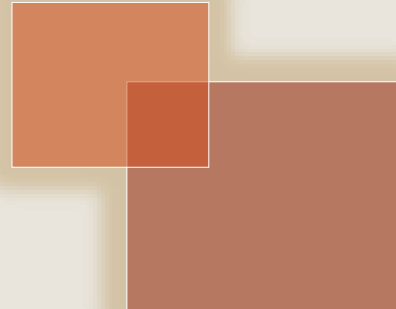
Elective Courses (minimum 7 units required) – Approved by Faculty Mentor (7)

Global Health Track Requirements:

Required Global Health Courses (23 units)

HPS 533 Global Health (3)
HPS 560 International Nutrition (3)
HPS 586 Maternal and Child Health (3)
EPID 630 Maternal and Child Health Epidemiology (3)
OR EPID 645 Nutritional Epidemiology (3)
OR EPID 660 Infectious Disease Epidemiology (3)
EPID 606 Changing Health Policy: Cultural Understanding & Epi Analysis (4)
One Planning and/or Evaluation Course (from approved list – consult with Faculty Mentor) (3)
HPS 909 Master's Report "Internship" (4)

Elective Courses (minimum 3 units required) – Approved by Faculty Mentor (3)



Recommended Course Sequencing – MPH Maternal & Child Health Track

This course sequencing schedule is only a recommendation. The schedule was designed so that the 4th semester would consist solely of internship hours thus allowing a student to engage in an internship project outside of Tucson. Students and advisors may opt to create a schedule that better suits student strengths and interests.

First Year

Fall Semester (13 units)

- EPID 573A* Basic Principles of Epidemiology (3)
- HPS 577* Sociocultural & Behavioral Aspects of Public Health (3)
- HPS 586 Maternal & Child Health (3)
- BIOS 576A* Biostatistics in Public Health (3)
- HPS 696H Maternal & Child Health/Public Health Seminar (1)

Spring Semester (9 units)

- HPS 588 Adolescent Health (3) **OR**
HPS 512 Public Health Approach to Mental Health Disorders in the U.S. (3)
- EHS 575* Environmental & Occupational Health (3)
- One Planning/Evaluation Course (approved by Faculty Mentor) (3)

Service Learning 597 Courses – (2 units) offered all semesters, including summer §

Second Year

Fall Semester (12 units)

- EPID 630 Maternal & Child Health Epidemiology (3)
- PHPM 574* Public Health Policy & Management (3)
- Elective (approved by Faculty Mentor) (3)
- Elective (approved by Faculty Mentor) (3)
- Internship Preparation Workshop (**required**; non-credit)

Spring Semester (6 units) ***

- HPS 909** Master's Report "Internship" (4)
- HPS 580 Integrated Public Health Learning Experience (1)
- Elective (approved by Faculty Mentor) (1)

*MPH required core courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change.

****Prerequisites for HPS 909 – Master's Report "Internship" - MCH Track:**

At least 3 MPH core courses; HPS 586, Maternal and Child Health; & (1) Planning & Evaluation Course.

***Students who require full time graduate status for loan/scholarship disbursement may need to take more units than the sequencing recommends.

§ Service Learning courses (597 A-G & S) can be taken from other programs within the College of Public Health with course prefixes of HPS, EPID, PHP, or PHPM. Service Learning courses are offered all semesters. Please consult the schedule of classes for exact course dates.

Recommended Course Sequencing – MPH Global Health Track

This course sequencing schedule is only a recommendation. Students and advisors may opt to create a schedule that better suits student strengths and interests.

First Year

Fall Semester (12 units)

- EPID 573A* Basic Principles of Epidemiology (3)
- BIOS 576A* Biostatistics in Public Health (3)
- HPS 577* Sociocultural Aspects of Public Health (3)~
- HPS 586 Maternal & Child Health (3)

Spring Semester (13 units)

- HPS 533 Global Health (3)
- HPS 560 International Nutrition (3)
- EHS 575* Environmental & Occupational Health (3)
- EPID 606 Changing Health Policy: Cultural Understanding & Epi Analysis (4)
- Internship Preparation Workshop (***required; non-credit***)

Second Year

Fall Semester (12 units)

- PHPM 574* Public Health Policy & Management (3)
- EPID 630 Maternal & Child Health Epidemiology (3) ***Or***
EPID 645 Nutritional Epidemiology (3) (spring offering) ***Or***
EPID 660 Infectious Disease Epidemiology (3) (spring offering)~
- Elective (approved by Faculty Mentor) (3)
- Planning/Evaluation Course (approved by Faculty Mentor) (3)

Spring Semester (5 units) ***

- HPS 909** Master's Report "Internship" (4)
- HPS 580 Integrated Public Health Learning Experience (1)

* MPH required core courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change.

~EPID 660 cannot be taken in same semester as HPS 577 due to course time conflict.

****Prerequisites for HPS 909 – Master's Report "Internship" - Global Health Track:** At least 3 MPH core courses; HPS 586, Maternal and Child Health; HPS 533, Global Health and (1) Planning and/or Evaluation Course.

***Students who require full time graduate status for loan/scholarship disbursement may need to take more units than the sequencing recommends.



Department of Health Promotion Sciences

Master of Public Health/Health Behavior Health Promotion

Scott Carvajal PhD, MPH – **Program Director**

Faculty: <https://publichealth.arizona.edu/departments/hps/primary-faculty>

The MPH in Health Behavior Health Promotion (HBHP), offered by [the Department of Health Promotion Sciences](#), is based on a philosophy of health education, health promotion, and disease prevention, to improve the quality of life of individuals, families and communities. The HBHP discipline focuses on three areas:

1. Sociocultural factors that influence health and health behavior;
2. Scientific and theoretical basis for planning, implementing, and evaluating effective public health education, health promotion and disease prevention programs; and
3. The goal of facilitating behavior changes for healthy life.

The program provides students with the opportunity to acquire the knowledge and skills that are essential for the promotion of health and prevention of disease in culturally diverse populations. Specific competencies that students are expected to acquire include: a working knowledge of sociocultural factors that influence health, an ability to plan culturally appropriate and effective public health interventions, knowledge and skills relating to the application of sociocultural principles to health promotion and disease prevention programs, culturally relevant service delivery that facilitates positively changed health behaviors, and appropriate methods and skills to effectively plan, implement, and evaluate public health programs.

The Health Behavior Health Promotion concentration places a strong emphasis on the following factors in its determination of a candidates' potential for success in the concentration: long range goals and commitment to public health; successful leadership experience or potential; work and volunteer experience related to the concentration's public health focus; demonstrated community service; public health experience or interest; documented experience and/or commitment to underserved areas and populations. The personal statements of students applying for admission to the Health Behavior Health Promotion concentration should include information regarding these factors.

MPH HBHP Total Minimum Credit Requirements (42 units)

Required Core Courses (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
HPS 580	Integrated Public Health Learning Experience (1)
Internship Preparation Workshop (required ; non-credit)	
Interprofessional Education Activities (documentation required ; non-credit)	

Required HBHP Courses (minimum 26 Units)

HPS 531	Contemporary Health Issues and Research (3)
HPS 532A	Applied Aspects of Program Planning, Implementation, and Evaluation I (4)§
HPS 535	Multicultural Health Beliefs (3) §
HPS 909	Master's Report "Internship" (4) §

Elective Courses: (minimum **10 units**): (Approved by Faculty Mentor);
Also see recommended elective list from HBHP faculty.

Service Learning Course Requirement: (minimum **2 units**)

Students are required to take two service-learning courses (1 unit each) for a **total of 2 units** :

Service Learning Course Options:

HPS 597A	Maternal & Child Health Programs in Urban Settings (1) <i>(offered summer II-Tucson)</i>
HPS 597B	Maternal & Child Health Programs in the Rural Southwest (1) <i>(offered summer pre-session-Northern Arizona-rural Native and non-Native communities)</i>
PHPM 597C	Border Health Service Learning Institute (1) <i>(offered summer II - US/Mexico Border)</i>
PHPM 597D	Rural Health Service Learning Institute (1) <i>(offered summer II - location varies)</i>
HPS 597E	Public Health for Community Wellness (2) <i>(offered fall & spring)</i>
PHP 597F	Phoenix Urban Service Learning (1) <i>(offered winter - Phoenix)</i>
HPS 597G	Open Airways for Schools (1) <i>(offered fall & spring)</i>
EPID 597S	Skin Cancer Prevention in the Community Setting (1-2) <i>(offered fall & spring)</i>

Note: Service Learning courses (597 A-G & S) can be taken from other programs within the College of Public Health with course prefixes of HPS, EPID, PHP, or PHPM. Other potential courses that might fulfill this requirement would require approval by the Program's Director. Service Learning courses are offered all semesters. Please consult the schedule of classes for exact course dates.



Recommended Course Sequencing

First Year

<u>Fall Semester</u>	(13 units)
HPS 531 **	Contemporary Health Issues & Research (3)
EPID 573A *	Basic Principles of Epidemiology (3)
BIOS 576A *	Biostatistics in Public Health (3)
HPS 577 *	Sociocultural & Behavioral Aspects of Public Health (3)
597#	Service Learning Course (1) (in August/Summer Session II)

Spring Semester (10 units)

HPS 532A §	Applied Aspects of Program Planning, Implementation & Evaluation I (4)
PHPM 574 *	Public Health Policy and Management (3)
Elective	(Approved by Faculty Mentor) (3)
Internship Preparation Workshop	(required; non-credit)

Summer Session between 1st and 2nd year (0-1 unit)

597# Service Learning Course (1) (if this requirement has not been met)

Second Year

<u>Fall Semester</u>	(11 units)
HPS 535 ** §	Multicultural Health Beliefs (3)
EHS 575 *	Environmental & Occupational Health (3)
HPS 909 §	Master's Report "Internship" (1)
Elective	(Approved by Faculty Mentor) (3)
597#	Service Learning Course (1) (if requirement has not been met)

Spring Semester (8 units) ***

HPS 580	Integrated Public Health Learning Experience (1)
HPS 909 §	Master's Report "Internship" (3)
Elective	(Approved by Faculty Mentor) (3)
Elective	(Approved by Faculty Mentor) (1)



§ Prerequisites:	HPS 532A: HPS 531 and HPS 577
	HPS 535: HPS 577
	HPS 909: At least 3 core courses and HPS 532A

* **MPH Required Core Courses** are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change.

Note: All 5 core courses must be completed prior to the student's last semester.

** This course only offered in this specific semester

***Students who require full time graduate status for loan/scholarship disbursement may need to take more units than the sequencing recommends.

Note: Service Learning courses (597 A-G & S) can be taken from other programs within the College of Public Health with course prefixes of HPS, EPID, PHP, or PHPM. Other potential courses that might fulfill this requirement would require approval by the Program's Director. Service Learning courses are offered all semesters. Please consult the schedule of classes for exact course dates.

Division of Public Health Practice and Translational Research

Master of Public Health/Health Services Administration

(Phoenix and Tucson campuses)

Cecilia Rosales, MD, MS - *Associate Dean, Phoenix Programs*

Faculty: <https://publichealth.arizona.edu/departments/phoenix-campus/hsa/primary-faculty>

The Master of Public Health in [Health Services Administration](#) is an accredited interdisciplinary College-wide program that prepares students to develop the skills needed to work in a variety of health related organizations such as health systems, health agencies, third party payers and/or health care supply chain organizations in both governmental and non-governmental settings.

The unique combination of public health and health care administration classes in this accredited curriculum will provide students with the tools they need to understand the multifaceted administrative and business aspects of health care. The Health Services Administration curriculum is comprised of specifically targeted courses, with a goal to graduate highly qualified health care administrators.

The program is geared toward students who are excited to enroll in courses that utilize a combination of on line and classroom style teaching modalities. Students selecting this program should possess some background in a public health or a health care related field, and/or have experience working or volunteering with at least one public health program or health care organization. In some circumstances, working students can perform their internship project at their worksite.

MPH Health Services Administration Total Minimum Credit Requirements (42 units)

Required Core Courses (16 units)

- EPID 573A Basic Principles of Epidemiology (3)
- PHPM 574 Public Health Policy and Management (3)
- EHS 575 Environmental and Occupational Health (3)
- BIOS 576A Biostatistics in Public Health (3)
- HPS 577 Sociocultural & Behavioral Aspects of Public Health (3)
- PHP 580 Integrated Public Health Learning Experience (1)
- Internship Preparation Workshop (**required; non-credit**)
- Interprofessional Education Activities (**documentation required; non-credit**)

Required Health Services Administration Courses (21 units)

- PHPM 507 Health Care Economics and Policy (3)
- PHPM 558 Health Care Marketing (3)
- PHPM 561 Introduction to Health Care Quality and Safety (3)
- PHPM 562 Health Services Administration (3)
- PHPM 569 Fundamentals of Health Budgeting and Financial Management (3)
- PHPM 608A Public Health Law and Ethics (3)
- PHP 641 Health Systems Delivery (3)

Required Health Services Administration Internship (5 units)

- PHP 909 Master's Report "Internship" (5)

Recommended Course Sequencing (Phoenix-based option)

First Year

Fall Semester (12 units)

PHPM 558 Health Care Marketing (3)
PHPM 562 Health Services Administration (3) *
PHPM 569 Fundamentals of Health Budgeting and Financial Management (3) *
EPID 573A Basic Principles of Epidemiology (3) ^ §
Internship Preparation Workshop (**required; non-credit**)

Spring Semester (12 units)

BIOS 576A Biostatistics for Public Health (3) ^ §
PHP 641 Health Systems Delivery (3) * @
PHPM 561 Introduction to Health Care Quality and Safety (3) *
PHPM 574 Public Health Policy and Management (3) ^ §

Second Year

Fall Semester (9 units)

EHS 575 Environmental and Occupational Health (3) ^ §
HPS 577 Sociocultural and Behavioral Aspects of Public Health (3) ^ §
PHP 909 Master's Report "Internship" (3) #

Spring Semester (9 units)

PHPM 507 Health Care Economics and Policy (3)
PHP 580 Integrated Public Health Learning Experience (1)
PHPM 608A Public Health Law and Ethics (3) *
PHP 909 Master's Report "Internship" (2) #

* This course is only offered in this specific semester (e.g. Fall or Spring).

^ Online option of this course only available in this specific semester (e.g. Fall or Spring). Course not available in person in Phoenix.

@ PHP 641 is an accelerated course for the first half of the spring semester. PHPM 574 Online is typically available as an accelerated option for the second half of the spring semester.

Prerequisites for PHP 909: At least 3 MPH core courses (*which must include BIOS 576A or EPID 573A*).

§ MPH Core Courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change. Note: All 5 core courses must be completed prior to the student's last semester.

Recommended Course Sequencing (Tucson-based option)

First Year

Fall Semester (12 units)

PHPM 569 Fundamentals of Health Budgeting and Financial Management (3) *
EPID 573A Basic Principles of Epidemiology (3) § ^
PHPM 558 Health Care Marketing (3)
PHPM 562 Health Services Administration (3) *
Internship Preparation Workshop (**required; non-credit**)

Spring Semester (12 units)

BIOS 576A Biostatistics for Public Health (3) § ^
PHPM 561 Introduction to Health Care Quality and Safety (3) *
PHP 641 Health Systems Delivery (3) * @
PHPM 574 Public Health Policy and Management (3) ^ @

Second Year

Fall Semester (9 units)

EHS 575 Environmental and Occupational Health (3) § ^
HPS 577 Sociocultural and Behavioral Aspects of Public Health (3) § ^
PHP 909 Master's Report "Internship" (3) #

Spring Semester (9 units)

PHPM 507 Health Care Economics and Policy (3)
PHP 580 Integrated Public Health Learning Experience (1)
PHPM 608A Public Health Law and Ethics (3) *
PHP 909 Master's Report "Internship" (2) #

* This course is only offered in this specific semester (e.g. Fall or Spring).

^ Online option of this course only available in this specific semester (e.g. Fall or Spring).

@ **PHP 641** is an accelerated course for the first half of the spring semester. **PHPM 574** Online is typically available as an accelerated option for the second half of the spring semester.

Prerequisites for PHP 909: At least 3 MPH core courses (*which must include BIOS 576A or EPID 573A*).

§ MPH Core Courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change. Note: All 5 core courses must be completed prior to the student's last semester.

Tucson students: This course sequencing utilizes many online core courses. If you want to maximize your in-person coursework, please contact your MPH Coordinator to discuss alternate options.

Division of Public Health Practice and Translational Research

Master of Public Health/ Public Health Practice

(Based at the Phoenix Campus)

Cecilia Rosales, MD, MS - *Associate Dean, Phoenix Programs*

Faculty: <https://publichealth.arizona.edu/academics/masters/mph/php>

The Master of Public Health in [Public Health Practice](#) is an interdisciplinary College-wide program that prepares students to develop the public health skills needed to work in a variety of governmental and non-governmental settings including the local, county and state departments of health, the Indian Health Service, Medicaid and Medicare programs, hospitals, and community health centers. Students learn to work effectively as part of multidisciplinary teams to develop, manage and evaluate public health programs designed to address health disparate populations.

The Public Health Practice concentration is geared toward students who are able to enroll in courses that utilize a combination of online, video conference, and in person teaching modalities. Students selecting the public health practice program should possess an academic background in a public health related field and/or experience working or volunteering within at least one public health program. Students from the Southwest College of Naturopathic Medicine may apply to this concentration as part of a collaborative dual degree program.

MPH PHP Total Minimum Credit Requirements (42 units)

Required Core Courses (16 units)

EPID 573A Basic Principles of Epidemiology (3)
PHPM 574 Public Health Policy and Management (3)
EHS 575 Environmental and Occupational Health (3)
BIOS 576A Biostatistics in Public Health (3)
HPS 577 Sociocultural & Behavioral Aspects of Public Health (3)
PHP 580 Integrated Public Health Learning Experience (1)
Internship Preparation Workshop (**required**; non-credit) – (semester before internship begins)
Interprofessional Education Activities (**documentation required**; non-credit)

Required Public Health Practice Courses (20 units)

PHPM 569 Fundamentals of Health Budgeting and Financial Management (3)
PHP 572 Applied Public Health Practice (3)
PHP 641 Health Systems Delivery (3)
PHP 696V Public Health Practice Seminar (2)
Planning/Evaluation Course (3) - Choose One:
 ○ HPS 529 Project Design & Implementation (3) **Or**
 ○ HPS 544 Fundamentals of Evaluation (3)
597 Service Learning Course (various options) (1) (approved by Faculty Mentor)
PHP 909 Master's Report "Internship" (5)

Elective Courses (minimum 6 units) - Approved by Faculty Mentor

Recommended Course Sequencing

First Year

Fall Semester (11 units)

PHPM 569 Fundamentals of Health Budgeting and Financial Management (3) *
EPID 573A Basic Principles of Epidemiology (3) ^ §
HPS 529 Project Design & Implementation (3) *
PHP 696V Public Health Practice Seminar (2) *
Internship Preparation Workshop (**required**; *non-credit*)

Winter Semester (0-1 unit)

Service Learning Course (Approved by Faculty Mentor) (1) [or Summer] +

Spring Semester (9 units)

PHPM 574 Public Health Policy and Management (3) ^ §
BIOS 576A Biostatistics in Public Health (3) ^ §
PHP 641 Health Systems Delivery (3) * @

Summer Session (0-1 units)

Service Learning Course (1) – Approved by Faculty Mentor [**or** Winter] +

Second Year

Fall Semester (12 units)

HPS 577 Sociocultural & Behavioral Aspects of Public Health (3) ^ §
EHS 575 Environmental and Occupational Health (3) ^ §
Elective (Approved by Faculty Mentor) (3)
PHP 909 Master's Report "Internship" (3) #

Spring Semester (9 units)

PHP 572 Applied Public Health Practice (3) *
Elective (Approved by Faculty Mentor) (3)
PHP 909 Master's Report "Internship" (2) #
PHP 580 Integrated Public Health Learning Experience (1)

* This course is only offered in this specific semester (e.g. Fall or Spring).

^ Online option of this course only available in this specific semester (e.g. Fall or Spring). Course not available in person in Phoenix.

@ PHP 641 is an accelerated course for the first half of the spring semester. PHPM 574 Online is typically available as an accelerated option for the second half of the spring semester.

Prerequisites for PHP 909: At least 3 MPH core courses (which must include BIOS 576A or EPID 573A).

§ MPH Core Courses are offered fall & spring semesters, allowing flexibility. The modality and number of offerings may vary by semester and are subject to change. Note: All 5 core courses must be completed prior to the student's last semester.

+ **Note:** Approved Service Learning Courses are offered all semesters. Please consult the schedule of classes for exact course dates and locations.

+Service Learning Course (1 unit):

Choose (1) course from the following:

- PHP 597F Phoenix Urban Service Learning (1) – (offered winter - Phoenix)
- PHP 597P Health Care for the Homeless (1) - (offered winter - Phoenix)
- HPS 597A Maternal & Child Health Programs in Urban Settings (1)
(offered summer II-Tucson)
- HPS 597B Maternal & Child Health Programs in the Rural Southwest (1)
(offered summer pre-session – location varies)
- PHPM 597C Border Health Service Learning Institute (1)
(offered summer II – US/Mexico Border)
- PHPM 597D Rural Health Service Learning Institute (1) – (offered summer II – location varies)



Online Master of Public Health

Spencer L. Willis, Jr., DrPH, CHES - **Director, Online Programs**

<https://publichealth.arizona.edu/academics/online-mph>

The online MPH curriculum combines a bedrock foundation in the core principles of public health with the option to choose one of three distinct concentrations. These concentrations reflect the most vital areas of public health, and satisfy the varied callings and personal interest of students. Unlike other programs, these concentrations are not light forays into each discipline. In fact, they make up exactly half of the course work throughout the 42-credit program. In as few as two years you can graduate with the skills and expertise to be a leader in public health.

The MPH program is a two-year program for full-time students; part-time students may take up to six years to complete the program. MPH students are required to select one of the three concentration areas: Applied Epidemiology, Health Services Administration, or Health Promotion.

Applied Epidemiology

The epidemiology curriculum provides systematic training in measuring and studying the distribution, characteristics and causes of disease across demographics. Epidemiology is a fundamental science of public health and is essential in the prevention of rare and chronic diseases, disability and premature death.

Health Services Administration

This concentration offers a combination of public health and health care administration classes that provides you with a multifaceted understanding of the administrative and business aspects of health care. Use the skills learned in the curriculum to pursue leadership roles in both governmental and non-governmental settings.

Health Promotion

The health promotion curriculum examines the sociocultural factors that influence health and health behavior. The concentration operates under the philosophy that education, communication and effective implementation of sound health policies and initiatives can improve the quality of life around you. Learn to plan education strategies and evaluate their effectiveness. Promote healthier lifestyles in culturally diverse populations around the world.

MPH Online Total Minimum Credit Requirements (42 units)

Required Core Courses (18 units) – All concentrations

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
BIOS 576A	Biostatistics in Public Health (3)
PHPM 569	Fundamentals of Health Budgeting and Financial Management (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
EHS 575	Environmental and Occupational Health (3)
Internship Preparation Workshop (required ; non-credit)	
Interprofessional Education Activities (documentation required ; non-credit)	

Applied Epidemiology - Required Concentration Courses (24 units)

EPID 555	Introduction to Maternal and Child Health Epidemiology (3)
EPID 573B	Epidemiologic Method (3)
EPID 573D	Analysis of Public Health Data (3)
BIOS 576B	Biostatistics for Research (3)
EPID 579	Applied Infectious Disease Epidemiology (3)
EPID 580	Integrated Public Health Learning Experience (1)
HPS 628	Public Health Research and Evaluation (3)
EPID 909	Master's Report "Internship" (5)

Health Services Administration - Required Concentration Courses (24 units)

PHPM 507	Health Care Economics and Policy (3)
PHPM 558	Health Care Marketing (3)
PHPM 561	Introduction to Health Care Quality and Safety (3)
PHPM 562	Health Services Administration (3)
PHP 580	Integrated Public Health Learning Experience (1)
PHPM 608A	Public Health Law and Ethics (3)
PHP 641	Health Systems Delivery (3)
PHP 909	Master's Report "Internship" (5)

Health Promotion - Required Concentration Courses (24 units)

HPS 531	Contemporary Health Issues and Research (3)
HPS 532P	Planning of Public Health Programs (3)
HPS 532E	Evaluation of Public Health Programs (3)
HPS 535	Multicultural Health Benefits (3)
HPS 580	Integrated Public Health Learning Experience (1)
HPS 628	Public Health Research and Evaluation (3)
HPS 642	Public Health Communications (3)
HPS 909	Master's Report "Internship" (5)



Dual Degree Programs

The Mel and Enid Zuckerman College of Public Health (MEZCOPH) has partnered with the College of Medicine, the College of Law, the College of Pharmacy, the Eller College of Management, and the College of Social and Behavioral Sciences to administer six dual degree programs:

MEZCOPH Dual Degree Programs:

- MD/MPH
- JD/MPH
- PharmD/MPH
- MPH/MBA
- MPH/MA-Latin American Studies
- MPH/MS-Mexican American Studies



Dual degree programs are excellent programs for individuals with a wide range of interests, diverse education, and multiple talents to gain expertise in both public health and other disciplines such as medicine, law, business and the social sciences. Students have the opportunity to earn two complementary degrees simultaneously. Dual degree applicants are required to meet the application deadlines, testing requirements, and submit program fees to each program independently. Academically, students are expected to fulfill the basic requirements of each program with the inclusion of course work that satisfies the requirements of both programs. Dual-degree students work with academic advisors in both programs to determine their specific course requirements. Information regarding the requirements for each dual degree program follows.

Medicine

The MD/MPH Dual Degree program is offered jointly with the two University of Arizona Colleges of Medicine and the Mel and Enid Zuckerman College of Public Health at the Tucson and Phoenix campuses. The dual degree program allows a student to earn a Doctor of Medicine (MD) and a Master of Public Health (MPH). The emphasis of the MD/MPH Dual Degree is on Clinical Leadership; it is anticipated that graduates will be leaders in a wide variety of clinical and public health settings. The MD/MPH program is designed to give students exposure to the public health, prevention and clinical issues they will face, and provide a framework for problem solving and implementing effective health programs.

The MD/MPH curriculum includes the five “core” MPH classes; Epidemiology, Health Administration and Policy, Biostatistics, and Environmental and Occupational Health and Social and Behavioral Sciences.

Total Minimum MPH Degree Credit Requirements = 42 units to complete the MPH degree in the Clinical Leadership concentration - *(in addition to the medical school curriculum)*. The MPH requirements are summarized below:

Required MD/MPH Courses (MPH Curriculum) - Tucson and Phoenix campuses

PHPM 570	Issues and Trends in Public Health (3)
EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
*580	Integrated Public Health Learning Experience (1)
PHPM 896I	Clinical Leadership and Administration (4)
*909	Master's Report "Internship" (11)
Internship Preparation Workshop (required ; non-credit)	
Interprofessional Education Activities (documentation required ; non-credit)	

Electives (minimum 8 units)

- * 909 Master's Report "Internship" units and the 580 Integrated Public Health Learning Experience course unit can be taken from programs within the College of Public Health with course prefixes of HPS, EHS, EPID, BIOS, PHP, or PHPM.



Latin American Studies

The MPH/MA Dual Degree Program allows students to earn a Master of Public Health and a Master of Arts degree in Latin American Studies (LAS). This dual degree program offers students the opportunity for interdisciplinary study allowing them to customize their dual degree by selecting **one of eight MPH concentration areas** and by taking electives addressing issues relevant to Latin American populations. The minimum number of required units varies based on the MPH concentration. A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit. Students work with academic advisors in both programs to determine their specific course requirements.

Latin American Studies (LAS) MA Requirements (36+ graduate units)

- LAS 500, Introduction to Latin American Studies (3 units)
- LAS 550 Research Methods Course (required for students completing thesis), **Or** Interdisciplinary Seminar Course approved by LAS advisor (3 units)
- Courses from primary discipline or thematic area (identified by student with LAS advisor approval) **for a total of 15 units.**
- International public health courses with assignments focusing on Latin America or U.S. – Mexico border (9 units)
- Thesis or Public Health/LAS Internship – 6 units to be completed through: 6 unit thesis or 3 – 6 units Public Health/LAS Master’s Report “Internship” and/or approved elective course work. (6 units)
- Language requirement met by Spanish 330 and Portuguese 305 *or* Spanish 251 and Portuguese 325 *or* equivalency exam. ***Please note: Language credits do not count toward the 36 total unit requirement for LAS.***

Master in Public Health Requirements (minimum of 42 units)

Core Courses (16 units)



EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics for Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
*580	Integrated Public Health Learning Experience (1)
	Internship Preparation Workshop (required; non-credit)
	Interprofessional Education Activities (documentation required; non-credit)

Internship

*909 Master’s Report “Internship” (3-5 units) **

Required Concentration Courses (11 - 26 units) **

The list of required courses can be found in this curriculum guide listed under each of the MPH disciplines. These requirements may change from year to year and are specific to the year of acceptance into the MPH program.

Electives (3-12 units) – Approved by Faculty Mentor **

* 909 Master’s Report “Internship” units and the 580 Integrated Public Health Learning Experience course unit can be taken from programs within the College of Public Health with course prefixes of HPS, EHS, EPID, BIOS, PHP, or PHPM.

** The number of units and prerequisite courses varies based on the MPH concentration. A maximum of 15 units may be shared between the MPH and LAS degrees.

Mexican American Studies

The MPH/MS Dual Degree Program allows students to earn a Master of Public Health and a Master of Science degree in Mexican American Studies. Students gain an advanced understanding of the Mexican American and Latino populations in the United States that prepares them to develop culturally-competent public health programs and policies targeting Latinos. This program provides subject and research competency on Mexican Americans as well as applied skills for working professionals and graduate students interested in better serving the Mexican American population of the Southwest. This dual degree program offers students the opportunity for interdisciplinary study allowing them to customize their dual degree by selecting one of **eight MPH concentration areas** and by taking electives addressing issues relevant to Mexican American and Latino populations. The minimum number of required units varies based on the MPH concentration. A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit. Students work with academic advisors in both programs to determine their specific course requirements.

Mexican American Studies Requirements:

Thirty-three (33) units are required for the MS in Mexican American Studies: a minimum of 21 core units, 6 elective units from the Latino Health and Wellness Strand, and the choice of a 6-unit thesis or 6 units of electives and an oral examination.

Required Core Courses (21 units)

MAS 508 The Mexican American: A Cultural Perspective (3) (Fall)
MAS 509 Mexican Immigration (3) (Spring)
MAS 525 Latino Health Disparities (3) (Fall)
MAS 566 Decolonial Chicana Theory (3) (Fall)
MAS 580A Advanced Research Methods on Latinos (3) (Spring)
MAS 587 Mexican Traditional Medicine (3) **or** MAS 505 Traditional Indian Medicine (3)
MAS Course (3)

Elective Courses: (minimum 6 units)– Approved by Faculty Advisor

Thesis or Examination Option (6 units)

Master of Public Health Requirements (minimum of 42 units)

Core Courses (16 units)

EPID 573A Basic Principles of Epidemiology (3)
PHPM 574 Public Health Policy and Management (3)
EHS 575 Environmental and Occupational Health (3)
BIOS 576A Biostatistics for Public Health (3)
HPS 577 Sociocultural and Behavioral Aspects of Public Health (3)
*580 Integrated Public Health Learning Experience (1)
 Interprofessional Education Activities (**documentation required**; non-credit)
 Internship Preparation Workshop (**required**; non-credit)

Internship (3-5 units)

*909 Master's Report "Internship" (3-5 units) **

Required Concentration Courses (11- 26 units) **

The list of required courses can be found in this curriculum guide listed under each of the MPH disciplines. These requirements may change from year to year and are specific to the year of acceptance into the MPH program.

Electives (3-12 units) – approved by Faculty Advisor) **

* 909 Master's Report "Internship" units and the 580 Integrated Public Health Learning Experience course unit can be taken from programs within the College of Public Health with course prefixes of HPS, EHS, EPID, BIOS, PHP, or PHPM.

** The number of units and prerequisite courses varies based on the MPH concentration.
A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit.





Law

The JD/MPH Dual Degree Program is offered jointly by the University of Arizona College of Law and the Mel and Enid Zuckerman College of Public Health. The dual degree program allows a student to earn a Juris Doctor degree (JD) and a Master of Public Health (MPH). The objective of the program is to support and encourage individuals with an interest in public health studies in the development of interdisciplinary knowledge and skills in preparation for a career in health law, public health policy, or a related field. The Law and Public Health (JD/MPH) dual degree is designed to train leaders in the field of public health law.

This dual degree program offers students the opportunity for interdisciplinary study allowing them to customize their dual degree by selecting one of **eight MPH concentration areas** and by taking electives addressing issues relevant to public health law. Graduates are prepared for positions in a variety of settings, including work in a health law or environmental section of a law firm; positions in local, state, and federal government; research or advocacy jobs in nongovernmental organizations; or posts in academia.

Students in the program fulfill all requirements necessary to earn a JD from the College of Law and an MPH from MEZCOPH and complete the separate requirements for the JD and MPH degrees in four years. (The program is open only to full-time students). The preferred sequence of courses would be to have dual degree students to be full time in the College of Law for the first year, then complete the first year of the Master of Public Health program during the second year, or vice-versa, before taking courses from both programs simultaneously. Following completion of the first year of study of each program, a student may take both law and Master of Public Health courses simultaneously, to complete both degrees. Students will have to work with their advisors to determine how they can coordinate their class schedules to meet both degree requirements. This will vary by the student's concentration area of study.

Master of Public Health (MPH) Requirements

The Mel and Enid Zuckerman College of Public Health offers an interdisciplinary Master's program in Public Health. Students need a minimum of 42 units, in order to complete the MPH degree (*in addition to the law school curriculum*).

Core Courses (16 units)



EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics for Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
*580	Integrated Public Health Learning Experience (1)
	Interprofessional Education Activities (<i>documentation required</i> ; non-credit)
	Internship Preparation Workshop (required; non-credit)

Internship

*909	Master's Report "Internship" (3-5 units) **
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Required Concentration Courses (11- 26 units) **

The list of required courses can be found in this curriculum guide listed under each of the MPH disciplines. These requirements may change from year to year and are specific to the year of acceptance into the MPH program.

Electives (3-12 units) – Approved by Faculty Advisor) **

* 909 Master's Report "Internship" units and the 580 Integrated Public Health Learning Experience course unit can be taken from programs within the College of Public Health with course prefixes of HPS, EHS, EPID, BIOS, PHP, or PHPM.

**The number of units and prerequisite courses varies based on the MPH concentration.
A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit.

Juris Doctor (J.D.) Requirements:

The College of Law offers an interdisciplinary Juris Doctor degree. Students will need a total of 88 graduate units to successfully complete the program. Students must be enrolled for a minimum of four semesters as a law student.

Tuition and Fees

Tuition and fees vary by program. Please contact both programs to better understand what your annual tuition and fees will be for each academic year. Charges will be governed by University Policy found at <https://grad.arizona.edu/funding/costs>.





Business Administration

The MPH/MBA Dual Degree Program is offered in partnership by the University of Arizona Mel and Enid Zuckerman College of Public Health and the Eller College of Management. The MPH/MBA dual degree program allows students to earn a Master of Public Health (MPH) and a Master of Business Administration (MBA) degree aimed to provide leadership and management training for the health services industry at the local, national and international levels.

This dual degree program offers students the opportunity for interdisciplinary study by allowing them to customize their dual degree by selecting **one of eight MPH concentration areas** which offer comprehensive knowledge and competencies in the public health sciences (health behavior and health promotion, family and child health, public health policy and management, health services administration, biostatistics, epidemiology, environmental health sciences) and state-of-the-art business practices (finance, accounting and marketing combined with strategic thinking, entrepreneurship and value-based management). The program prepares graduates to transfer strategic thinking, scientific know-how and leadership and managerial skills to rapidly changing environments and global health challenges in the 21st century. Graduates are prepared for work in health industry leadership positions, including health care marketing, healthcare consulting, hospital administration, managed care, biotechnology, healthcare related non-profit work or positions in academia.

Students in the MPH/MBA dual degree program complete the separate requirements for the MPH and MBA degrees in three years upon the completion of a minimum of 78-87 units in Public Health and Business Administration. (The program is open only to full-time students). The preferred sequence of courses is for dual degree students to start full time in the Eller College of Management for the first year, then complete the first year of the Master of Public Health program during the second year of studies, then courses from both programs simultaneously in the third year. Following completion of the first year of study of each program, a student may take both MPH and MBA courses simultaneously, to complete both degrees. Students will have to work with their advisors to determine how they can coordinate their class schedules to meet both degree requirements. This will vary by the student's concentration area of study within the MPH Program. The concentrations most easily coordinated with the MBA are Public Health Policy and Management, Health Behavior Health Promotion, and Biostatistics. Although, all MPH and most MBA concentrations are possible.

Master of Public Health (MPH) Requirements:

The Mel and Enid Zuckerman College of Public Health offers an interdisciplinary Master's program in Public Health. Students need a minimum of 42 units (*in addition to the required MBA curriculum*).

Core Courses (16 units)

- EPID 573A Basic Principles of Epidemiology (3)
- PHPM 574 Public Health Policy and Management (3)
- EHS 575 Environmental and Occupational Health (3)
- BIOS 576A Biostatistics for Public Health (3)
- HPS 577 Sociocultural and Behavioral Aspects of Public Health (3)
- *580 Integrated Public Health Learning Experience (1)
- Interprofessional Education Activities (***documentation required***; non-credit)
- Internship Preparation Workshop (**required; non-credit**)

Internship

*909 Master's Report "Internship" (3-5 units) * *

Required Concentration Courses (11- 26 units)* *

The list of required courses can be found in this curriculum guide, and also on the MPH [website](#), listed under each of the MPH disciplines. These requirements may change from year to year and are specific to the year of acceptance into the MPH program.

Electives (3-12 units) - approved by Faculty Advisor)* *

* 909 Master's Report "Internship" units and the 580 Integrated Public Health Learning Experience course unit can be taken from programs within the College of Public Health with course prefixes of HPS, EHS, EPID, BIOS, PHP, or PHPM.

**The number of units and prerequisite courses varies based on the MPH concentration.

A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit. In summary, a student enrolled in the dual degree program may count 14-21 units depending on the concentration, toward both degrees.

Master of Business Administration (MBA) Requirements:

The Eller College of Management offers a Master of Business Administration degree. Admitted students will need a minimum of 55 graduate units to successfully complete the MBA degree program. Students must be enrolled for full academic year as an MBA student.

Core Courses (30 units)

Students will take courses in Accounting, Economics, Finance, Management, Marketing, Management Information Systems, as well as Business Communication, complete an MBA consulting project, and participate in a Global Business Experience to an emerging or developing economy.

Required Concentration Courses (9 – 15 units)

Concentration options include: Entrepreneurship, Finance, Health Care Management, Management Information Systems, and Marketing.

Electives (10 – 16 units)

Course selection to be completed in coordination with the MBA academic advisor.

Tuition and Fees

Tuition and fees vary by program. Please contact both programs to better understand what your annual tuition and fees will be for each academic year. Charges are governed by the UA Policy: <https://grad.arizona.edu/funding/costs/differential-tuition-dual-degrees>

Pharmacy

The Doctor of Pharmacy/Master of Public Health (PharmD/MPH) is offered jointly by the University of Arizona College of Pharmacy and the Mel and Enid Zuckerman College of Public Health. The dual degree program allows students to simultaneously earn a Doctor of Pharmacy (PharmD) and a Master of Public Health (MPH). This PharmD/MPH combines the complementary strengths of the College of Pharmacy and the Zuckerman College of Public Health to provide students with an integrated curriculum focusing on knowledge and ingenuity in the delivery of pharmaceutical care within the broader population based public health environment.

Dual Degree Requirements:

PharmD/MPH dual degree applicants must meet the application deadlines, testing requirements, and submit program fees to each program independently. Dual degrees refer to a formal, approved program for a student to earn two degrees simultaneously. Dual degrees allow flexibility and encourage interdisciplinary work. Since both degrees already exist, the approval process is minimal. The minimum requirements for dual degrees are:

1. Students must apply to and be accepted into both programs (two application fees will be required),
2. Students must meet all the requirements for both degrees, and
3. Students must be enrolled for a minimum of two semesters as an MPH student.

Students enrolled in the dual degree program complete the separate requirements as an integrated curriculum taking courses for the PharmD and MPH degrees during the same semesters. This can allow students to complete both degrees within 5 years of study (at least one year sooner than pursuing the degrees separately), if they are full-time students. In order to facilitate a streamlined combined program there will be acceptance of up to 21-22 units toward both degrees (contact the MPH and PharmD Advisors for information about these course units). Students will have to work with their advisors to determine how they can coordinate their class schedules to meet both degree requirements. This will vary by the student's MPH concentration area of study within the MPH Program

This dual degree program consists of the PharmD curriculum and any one of the MPH concentration areas. The concentration areas most easily coordinated include:

- Biostatistics
- Epidemiology
- Health Behavior and Promotion
- Public Health Policy and Management

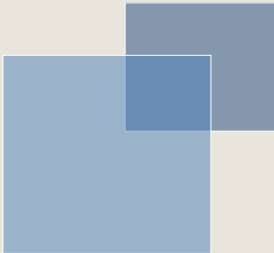
The Masters of Public Health (MPH) also has concentration areas in Environmental and Occupational Health; Family and Child Health; Health Services Administration; One Health and Public Health Practice. Students may consider these concentrations; however, the coordination with the PharmD may be more difficult.

Depending on the student's choice of concentration within the MPH, the dual degree program could lead to a wide variety of career options. PharmD/MPH degree graduates may assume leadership roles in practice, health policy, governmental and non-governmental agencies, and research and academic institutions. Students will be provided with the expertise and competencies essential to provide care and services, in order to promote the health and wellbeing of local and global communities.

Master of Public Health (MPH) Requirements:

The Mel and Enid Zuckerman College of Public Health offers an interdisciplinary Master's program in Public Health. Students need a minimum of 42 units, in order to complete the MPH degree (*in addition to the required **PharmD** curriculum*).

Core Courses (16 units)



EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy and Management (3)
EHS 575	Environmental and Occupational Health (3)
BIOS 576A	Biostatistics for Public Health (3)
HPS 577	Sociocultural and Behavioral Aspects of Public Health (3)
* 580	Integrated Public Health Learning Experience (1)
	Interprofessional Education Activities (<i>documentation required</i> ; non-credit)
	Internship Preparation Workshop (<i>required</i> ; non-credit)

Internship (3 - 5 units)*

909, Master's Report "Internship" (up to 6 units; the number of internship units and prerequisite courses varies based on the MPH concentration). Four units of Pharmacy Practice Project can count toward 6 units of 909. Students are required to present projects at MEZCOPH and during the College of Pharmacy poster day.

* 909 Master's Report "Internship" units and the 580 Integrated Public Health Learning Experience course unit can be taken from programs within the College of Public Health with course prefixes of HPS, EHS, EPID, BIOS, PHP, or PHPM.

Each MEZCOPH concentration has an additional group of required courses and electives to make up the units minimum required MPH units noted above (between 18 and 27 units). See the MEZCOPH Academic Curriculum Guide, for these MPH courses listed under each concentration area.

Doctor of Pharmacy Requirements:

The College of Pharmacy requires four units of professional electives (non-practicum) and 15 units of practicum electives for the PharmD program. Total units (prepharmacy + professional): $70 + 142 = 212$ units.

Tuition and Fees

Tuition and fees vary by program. Please contact both programs to better understand what your annual tuition and fees will be for each academic year. Charges are governed by the UA Policy: <https://grad.arizona.edu/funding/costs/differential-tuition-dual-degrees>



Department of Epidemiology and Biostatistics

Master of Science in Biostatistics

Edward J. Bedrick, PhD – **Program Director**

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>

The Master of Science in Biostatistics is offered by the [Department of Epidemiology and Biostatistics](#). The educational objective is to prepare individuals to work effectively as applied biostatisticians in a variety of public health, epidemiological and clinical research settings. The difference between the MS in Biostatistics and MPH concentration in Biostatistics is that the MS provides training in probability and statistical theory with a research focus, while the MPH provides a broader background in public health. A competitive applicant will have a strong quantitative background; at least three semesters of college-level calculus through multivariable/vector calculus is required; in addition, one semester of linear algebra is strongly recommended.

Master of Science in Biostatistics - Total Minimum Credit Requirements (39 units):

Required Courses (27 units)

EPID 573A	Basic Principles of Epidemiology (3)
BIOS 576A	Biostatistics in Public Health (3)
BIOS 576B	Biostatistics for Research (3)
BIOS 576C	Applied Biostatistics Analysis (3)
BIOS 585	Public Health Fundamentals for Researchers (3)
BIOS 647	Analysis of Categorical Data (3)
BIOS 688	Statistical Consulting (3)
MATH 564	Theory of Probability (3)
MATH 566	Theory of Statistics (3)

Elective Courses * (6 units)

At least 6 units from the following courses:

BIOS 648	Analysis of High Dimensional Data (3)
BIOS 675	Clinical Trials and Intervention Studies (3)
BIOS 684	General Linear and Mixed Effects Models (3)
BIOS 686	Survival Analysis (3)

Other elective courses:

BIOS 576D	Data Management and the SAS Programming Language (3)
EPID 677	Genetic Association Studies (3)
BIOS 685	Special Topics in Biostatistics (3)
BIOS 687	Theory of Linear Models (3)
STAT 571A	Advanced Statistical Regression Analysis (3)
STAT 571B	Design of Experiments (3)
STAT 675	Statistical Computing (3)

*Electives may also be chosen from courses taught in other programs with approval of the Biostatistics Faculty Advisor.

Required Master's Thesis: BIOS 910 (6 units)

Department of Community, Environment and Policy

Master of Science in Environmental Health Sciences

Kelly Reynolds, PhD, MSPH – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/cep/ehs/faculty>

The Master of Science in Environmental Health Sciences is offered by the [Department of Community, Environment and Policy](#). Using an interdisciplinary approach, Environmental Health Sciences provides the critical link between environmental and occupational exposures and human health.

The degree prepares individuals to evaluate and control health risks posed by chemical and biological contaminants and physical exposures (noise, heat and radiation) in occupational environments and communities. Students will receive advanced systematic training in epidemiological and community-based research methods, statistical analysis, exposure assessment, environmental modeling, toxicology, and intervention design. Graduates of this program will apply theory and methods to public health research, evaluation, analysis and decision-making. The program promotes approaches for assessing, preventing and controlling environmental hazards to human health.

The Master of Science degree is designed for individuals who seek training in environmental health research. It is anticipated that graduates will occupy positions as project leaders, program directors and research personnel in academic, government, corporate, community and industrial settings.

For the MS, at least 42 credits are required for the major (including a minimum of 12 units of electives and a minimum of 6 units of thesis). The overall course of study will be developed by the student and the faculty mentor and approved by the student's Graduate Committee and Chair of the Environmental Health Sciences Section. The MS degree program requires approximately two to three years for completion including development and defense of a research thesis.

Successful MS students in our program may be admitted directly to the PhD program pending a favorable vote by the primary EHS faculty and completion of their MS degree.



Required Master of Science in EHS Curriculum:

Total Minimum Credit Requirements: = 42 units

Required Major Courses (24 units):

EPID 573A	Basic Principles of Epidemiology (3)
BIOS 576A	Biostatistics in Public Health (3)
BIOS 576B	Biostatistics for Research (3)
EHS 584	Fundamentals of Industrial and Environmental Health (3)
EHS 585	Public Health Fundamentals for Researchers (3)*
EHS 502	Environmental Monitoring and Analysis (3)
EHS 653	Applied Exposure Assessment (3)
EHS 696R	Environmental Health Seminar (1 unit each semester – 3 times)

* (or advisor approved substitution)

Elective Courses: Minimum of **12 elective units** required for the MS (approved by faculty advisor). Students select courses in areas of emphasis: Exposure and Risk Assessment, Climate and Health, Environmental Contaminant Modeling or Occupational Health and Safety.

Required Master's Thesis: EHS 910 (6 units)



Department of Epidemiology and Biostatistics

Master of Science in Epidemiology

Kacey Ernst, PhD, MPH – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>

The Master of Science in Epidemiology is offered by the [Department of Epidemiology and Biostatistics](#). The Master of Science degree in Epidemiology is designed for individuals who wish to pursue training in epidemiological research. It is anticipated that graduates will occupy positions as research administrators, program managers, analysts, and evaluators in universities, health departments, governmental agencies, and similar organizations. Students have the option of either a general MS degree in Epidemiology or a specialization in clinical epidemiology. The requirements for these two tracks vary slightly. Students who are interested in clinical epidemiology should contact the Epidemiology Program Director for additional information.

The overall course of study for the MS degree will be developed by the student and the advisor and approved by the student's Graduate Committee and the Epidemiology Program Director. On average, the MS program requires approximately two years for completion. The first year is usually devoted to core coursework and completion of the qualifying exam. The second year is focused on remaining coursework and development of the master's thesis research. Consult the UA catalog for further details on the current course schedule and specific course requirements.

MS Epidemiology Total Minimum Credit Requirements (42 units)

Master of Science in Epidemiology Curriculum:

Required Major Courses (30 units)



EPID 573A	Basic Principles of Epidemiology (3)
EPID 573B	Epidemiologic Methods (3)
EPID 573C	Advanced Epidemiology (3)
BIOS 576A	Biostatistics for Public Health (3)
BIOS 576B	Biostatistics for Research (3)
EPID 585	Public Health Fundamentals for Researchers (3)
EPID 660	Infectious Disease Epidemiology (3)
EPID 670	Chronic Disease Epidemiology (3) or EPID 615A Cancer Epidemiology and Prevention (3)
EPID 696A	Epidemiology Seminar (1 unit - 3 times), (or equivalent: approved by Faculty Advisor)
BIOS XXX	Biostatistics course beyond BIOS 576B (3)

Epidemiology Courses or Approved Electives (6 or more units – Approved by Faculty Advisor). There is a maximum of 6 units from Independent Study/Research Credit (EPID 599, 699.)

Required Master's Thesis, EPID 910 (6 units)

Department of Epidemiology and Biostatistics

Master of Science in Epidemiology

Clinical Epidemiology Track

This track is an option for clinically-based researchers seeking to improve their ability to conduct research. The expectation is that students seeking this track will be physicians seeking to conduct clinical research. The overall course of study for this Clinical Epidemiology MS track will be developed by the student and the advisor and approved by the student's Graduate Committee and the Epidemiology Program Director. On average, the MS program requires approximately two years for completion. The first year is usually devoted to core coursework and completion of the qualifying exam. The second year is focused on remaining coursework and development of the master's thesis research. Consult the UA catalog for further details on the current course schedule and specific course requirements.

Master of Science in Epidemiology-Clinical Epidemiology Track Curriculum Total Minimum Credit Requirements (42 units)

Required Major Courses (29 units)

EPID 573A	Basic Principles of Epidemiology (3)
EPID 573B	Epidemiologic Methods (3)
EPID 573C	Advanced Epidemiology (3)*
BIOS 576A	Biostatistics in Public Health (3)
BIOS 576B	Biostatistics for Research (3)**
EPID 585	Public Health Fundamentals for Researchers (3)
PHCL 595B	Scientific Writing, Presentation and Bioethics (2)**
EPID 652	Grantsmanship for a Winning Proposal (3)
BIOS 675	Clinical Trials & Intervention Studies (3)**
EPID 696A	Epidemiology Seminar (1 unit - 3 times) (or equivalent approved by Faculty Advisor)

Epidemiology Courses or Approved Electives (minimum **7 units** – approved by Faculty Advisor)
There is a maximum of 6 units from Independent Study/Research Credit (EPID 599, 699).
Required Master's Thesis, **EPID 910 (minimum 6 units)**

*This course is only offered in the fall semester.

**This course is only offered in the spring semester.



Doctoral Programs

The UA Zuckerman College of Public Health is committed to offering professional and academic doctoral degree programs designed to prepare individuals for rewarding careers in public health at the local, national and international level. These programs are adept at integrating academic learning with public health practice to ensure a diverse and well-rounded educational experience.

Doctorate in Public Health (DrPH):

The DrPH is an advanced, professional degree program designed for the student who has a Master of Public Health (MPH) degree or its equivalent and who intends to pursue a leadership career as a public health professional. The DrPH program focuses on developing future leaders in public health practice who will advance the public's health through the integration and application of a broad range of knowledge and analytical skills in leadership, practice, policy analysis, research, program management and professional communication.

The DrPH program prepares individuals to translate scientific knowledge into community-based programs that improve the health status of communities, identify solutions to community health problems, and provide leadership in public health policy and management within both academic and nonacademic settings, as well as in public-agency or private-sector settings that emphasize improving the health of the public. It follows that public health workers from the state and region with the requisite experience and subsequent training will be best suited and prepared for creating the administrative infrastructure necessary for promotion of a healthy public and amelioration of current public health issues in the region.

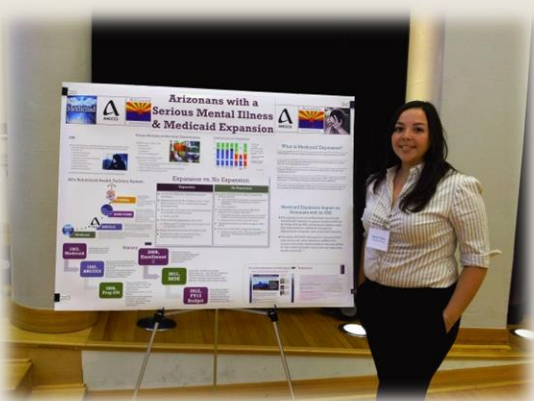
There are two key examinations associated with the DrPH program that indicate a student's progress toward obtaining the degree. The DrPH program requires students to complete a written and oral comprehensive doctoral examinations and a dissertation defense.

DrPH Options:

There are two areas of study available to DrPH candidates. Students are required to select either ***Maternal and Child Health*** or ***Public Health Policy and Management***. A description of each area is included on the following pages.

DrPH Course Requirements:

The DrPH course requirements are determined by the DrPH concentration that offers the DrPH area of study. The specific course requirements for each area are listed on the following pages.



Prerequisites: Students should be aware that some of the coursework for the DrPH have pre-requisites; therefore, students work with their Faculty Advisor to plan their coursework accordingly. In addition, students without an MPH degree will be required to complete the five core MPH courses.

Department of Health Promotion Sciences

DrPH / Maternal and Child Health



Velia Leybas Nuño, PhD, MSW – Program Director

Faculty: <https://publichealth.arizona.edu/departments/hps/primary-faculty>

The DrPH in Maternal and Child Health is a degree offered by the [Department of Health Promotion Sciences](#). The DrPH program focus is on the population-based study of health and health care among the maternal and child health population which includes, but is not limited to families, infants, children, adolescents, and women of child bearing age. The program prepares students for administrative leadership, research and teaching positions at local, state, tribal, federal, or global levels. Graduates hold positions as program directors, faculty, MCH program developers, policy analysts, and researchers.

The doctoral program typically requires four to five years for completion. The first two to three years generally involves coursework, the written and oral comprehensive examinations, and the development of a doctoral proposal. The student determines the doctoral proposal in consultation with the student's Dissertation Committee. Doctoral students defend their dissertation through a public presentation and closed oral examination with their Dissertation Committee.

DrPH Admissions Criteria:

The program structure aligns with students who have been awarded a Master's degree, preferably a Master of Public Health, and at least two years of public health work experience.

Required Courses:

Of the 55 credit hours in the major, 14 are required DrPH courses, 16 are DrPH courses specific to the area of concentration; 7 units are from electives or selectives approved by the major advisor, and 18 units are dissertation hours. All students designate a minor area of study that will be outside of the courses required for the DrPH. ***Students entering without a prior MPH degree will be required to complete the five core MPH courses offered through MEZCOPH, or their equivalent, in addition to the minimum DrPH credit hours of course work in the major.***

DrPH Required Courses (14 units)

PHPM 569	Fundamentals of Health Budgeting and Financial Management (3)
PHPM 608A	Public Health Law and Ethics (3)
HPS 609	Evaluating the Public Health Literature (1 unit; 2 times) ⁺
HPS 544	Fundamentals of Evaluation (3) or alternate (3) (approved by Faculty Advisor)
HPS 704	Doctoral Public Health Leadership for Health Equity (3)

⁺ HPS 609 is a 1 unit course that must be taken twice, preferably during the first year in residence.

DrPH Maternal and Child Health Required Courses (16 units)

HPS 565 Public Health Advocacy (3)

HPS 682 Women and Children Health Policy (3)

Service Learning Course (597 course within the College - any from the series) (1)

Methods Courses

- HPS 620A Advanced Research Methods in Health Promotion I (Fall) (3)
- HPS 620B Advanced Research Methods in Health Promotion II * (Spring) (3)
- HPS 605 Community Based Participat. Action Research Decrease Health Disparities (3)

* (Advanced Research Methods in Health Promotion II – course prerequisite: BIOS 576B)

Concentration Electives (minimum 7 units – approved by Faculty Advisor)

Minor (minimum 9 units) The minor area of study can be in other academic doctoral programs in Public Health, or in other doctoral programs throughout the university. The minor area of study specifies the number of minor units with a minimum of 9 units.

Dissertation (minimum 18 units)

The dissertation experience provides students a mentored opportunity to analyze an important public health problem by applying state-of-the-art theoretical and applied practices.

DrPH in Maternal and Child Health – Total Minimum Credit Requirements: 64 units





Department of Community, Environment and Policy

DrPH – Public Health Policy and Management

Joe Gerald, MD, PhD – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/cep/ehs/faculty>

The DrPH program in Public Health Policy and Management (PHPM) is offered by the [Department of Community, Environment and Policy](#). This degree program is designed to further develop the knowledge and skills of public health practitioners who are currently serving in the public or private sector. Areas of emphasis include analyzing public health problems, managing the public health workforce, crafting evidence-based recommendations and translating those recommendations into public policy. Because of the program's unique setting and activities, graduates will be prepared to work collaboratively with a broad range of organizations that serve the diverse communities and populations residing in the Southwest.

The doctoral program typically requires four to five years to complete. The first two to three are devoted to coursework and the last 2-3 to completing an area of applied research. While certain courses are required, each student's course of study is tailored to meet their specific goals and interests within the bounds established by the student's Graduate committee. All students are required to defend their area of research via an oral examination with their dissertation committee followed by a public presentation of their findings.

Graduates are expected to competently:

- construct and interpret budgets, apply accepted financial concepts to analyze the fiscal status of public health, for-profit and non-profit health care organizations.
- apply legal frameworks to analyze public health problems, explain the source and scope of the state's power to regulate public health and critique how the law can improve or impair the public's health.
- describe the state and federal processes that govern the delivery of health services, analyze the impact of legislative and regulatory proposals on population health, and create products that inform others about contemporary health policy issues.
- critique, analyze and evaluate administrative, management and regulatory issues that impact the delivery of medical care in the US.
- collaborate with local advocacy groups to critically analyze public health problems, formulate legislative solutions and develop evidence-based justifications to secure bipartisan support.

DrPH Admissions Criteria:

The program is designed for students who have been awarded a Master's degree, preferably a Master of Public Health, and who have at least two years of public health work experience.

Required Courses and Credit Hours:

A minimum of 64 credits is required to earn the degree, 46 units of course work and 18 units of dissertation credit. Required course work includes 14 units in the DrPH core; 14 units in the PHPM concentration; 9 units of electives, at least 9 units in a minor area of study, and 18 units of dissertation hours. ***Students entering without a MPH degree are required to complete the five core MEZCOPH MPH courses or their equivalent in addition to the minimum required for the DrPH degree.***

DrPH Required Courses (14 units)



PHPM 569	Fundamentals of Health Budgeting and Financial Management (3)
PHPM 608A	Public Health Law and Ethics (3)
HPS 609	Evaluating the Public Health Literature (2)†
HPS 544	Fundamentals of Evaluation or alternate approved by advisor (3)
HPS 704	Doctoral Public Health Leadership for Health Equity (3)

Public Health Policy and Management Required Courses (14 units)

PHPM 617	Advanced Public Health Policy Analysis (3)
PHP 641	Health Systems Delivery (3)
PHPM 696P	Public Health Policy and Management Field Course (2)
	Community and Cultural Sensitivity Course (3) *
	Higher Level Methods Course (3) *

Electives (minimum 9 units with approval from Faculty Advisor)

Minor (minimum 9 units)

The minor area of study can be in other academic doctoral programs in Public Health or in other doctoral programs throughout the University. The minor area of study specifies the number of required minor units with the minimum being 9 units.

Dissertation (minimum 18 units)

The dissertation experience is expected to provide students a mentored opportunity to analyze an important public health problem by applying state-of-the-art theoretical and applied practices. The ultimate goal is to develop an evidence-based, policy-relevant solution to improve the health and well-being of the general public.

DrPH in Public Health Policy and Management - Total Minimum Credit Requirements: 64 units

† HPS 609 is a 1-unit course that must be taken twice, preferably during the first year in residence.

* With approval of faculty advisor

PhD Minor in Public Health

The PhD minor in Public Health is designed for individuals from other University of Arizona doctoral degree programs who wish to obtain graduate training in Public Health. The student identifies at least one faculty member with a primary appointment in MEZCOPH to serve on his or her committee. The student should hold a Planning Committee meeting where the committee faculty can provide advisement to the student regarding coursework.

PhD Minor in Public Health Total Minimum Credit Requirements (15 units)

The Public Health minor consists of a minimum of three Master of Public Health Core courses and two concentration specific courses agreed to by the student and his or her minor advisor. At the time the selections are made, the minor advisor and the student will define how competency will be determined. The demonstration may take several forms consistent with the practices of the home department. The minor member may contribute to the formulation of the comprehensive exam; the minor member may submit a specific written question; the minor may require participation in an active public health experience with a written summary to cite only a few examples. Other approaches are permissible with the consent of the student's graduate committee.

In addition to the PhD minor in Public Health, The University of Arizona Mel and Enid Zuckerman College of Public Health (MEZCOPH) offers a **Master of Public Health (MPH)** degree featuring seven concentration areas. Students can apply to the **MPH Program** within any of the concentrations areas. The MPH can also serve as the students PhD minor, although the MPH requirements must be completed prior to completion of the PhD. For more information regarding the MPH program in general, please refer to the following website: <http://publichealth.arizona.edu/academics/mph>



Department of Epidemiology and Biostatistics

PhD in Biostatistics



Edward J. Bedrick, PhD – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>

The PhD in Biostatistics is offered by the [Department of Epidemiology and Biostatistics](#). The doctoral degree program in Biostatistics will have an emphasis on the foundations of statistical reasoning and will require its graduates to complete rigorous training in applied probability and statistical analyses. This program prepares students who have demonstrated excellence in mathematics and the sciences to become research biostatisticians in academia, industry, or government.

The PhD program in Biostatistics is designed for individuals having strong quantitative skills with a background or interest in the biological, medical, or health sciences, and potential to become effective researchers in biostatistics. Applicants for the PhD in Biostatistics must have a prior Bachelor's degree. Applicants with a Master's degree in biostatistics, statistics, or applied mathematics will be given preference for admission and financial support. To the extent possible, the curriculum of each student will be tailored to his or her background and interests. A competitive applicant to the PhD in Biostatistics will have a strong quantitative background; at least three semesters of college-level calculus through multivariable/vector calculus is required; in addition, one semester of linear algebra is strongly recommended.

The doctoral program requires approximately four to five years for completion. The first two years of this time are usually devoted to coursework, the comprehensive doctoral examinations, and development of doctoral research. The program is research oriented and centers on a major research project. The overall course of study is developed by the student and the Faculty Advisor, and is approved by the student's Graduate committee and the Biostatistics Program Director. Students will be required to defend their dissertation through a public presentation and oral examination with their committee.

Credit Hours:

The curriculum requires a minimum of 47 units of course work in the major, of which 35 units are from required courses and 12 are electives. Students are required to select a minor and complete 9 semester hours or more (depending on requirements of the minor department) in their area of interest, and a minimum of 18 units of dissertation credit.

Students with a prior MS degree in Biostatistics or Statistics are eligible for admission into the Biostatistics PhD program. Students who enter the Biostatistics PhD program after completion of an MS degree from MEZCOPH, may use 23 units towards the Doctorate in Biostatistics (PhD). Thus, students with an MS must complete a minimum of 18 additional units of course work, 6 units of seminar, 9 units or more in a minor subject, and 18 dissertation units. They will be allowed to substitute more advanced courses for any required courses already completed.

PhD in Biostatistics Curriculum:

Required Courses (35 units)

MATH 564	Theory of Probability (3)
MATH 566	Theory of Statistics (3)
EPID 573A	Basic Principles of Epidemiology (3)
BIOS 576B	Biostatistics for Research (3)
BIOS 685	Special Topics in Biostatistics (3)
BIOS 687	Theory of Linear Models (3)
BIOS 688	Statistical Consulting (3)
STAT 571B	Design of Experiments (3)
STAT 675	Statistical Computing (3)
PHCL 595B	Scientific Writing, Presentation and Bioethics (2)
BIOS 696S	Biostatistics Seminar (1 unit; 2 times)
HPS 609	Evaluating Public Health Literature (1)
BIOS 585	Public Health Fundamentals for Researchers (3)



Elective Courses (12 units)

BIOS 576C	Applied Biostatistics Analysis (3)
BIOS 576D	Data Management and the SAS Programming Language (3)
BIOS 647	Analysis of Categorical Data (3)
BIOS 648	Analysis of High Dimensional Data (3)
BIOS 675	Clinical Trials and Intervention Studies (3)
EPID 677	Genetic Association Studies (3)
BIOS 686	Survival Analysis (3)

Electives may also be chosen from other Statistics or Mathematics courses with approval of the Biostatistics Faculty.

Note: BIOS 576A, Biostatistics in Public Health (3 units), is considered a prerequisite, which will have been met by most entering students.

Minor (minimum 9 units)

Each PhD student must complete a minimum of 9 credit hours of course work in a minor area. The minor area of study specifies the number of required minor units. This should consist of a coherent set of courses in an area (or in related areas) of application of biostatistics; the courses may be from more than one program. Minor courses should be primarily applied as opposed to mathematics/statistical in nature.

Dissertation- minimum of 18 units required

PhD in Biostatistics Total Minimum Credit Requirements (74 units)

PhD Minor in Biostatistics

The PhD minor in Biostatistics is administered by the Biostatistics concentration in MEZCOPH. The PhD Minor in Biostatistics is designed for individuals from other University of Arizona doctoral degree programs who wish to obtain graduate training in Biostatistics. *A total of 15 course credits are required.* Admission to the minor must be approved by the Biostatistics minor faculty representative and the Biostatistics Program Director, no later than enrollment in the second minor course. Selection of courses must be performed in consultation with the Biostatistics minor faculty representative.

PhD Minor in Biostatistics Requirements:

Minor Courses (*minimum of 15 units*)

BIOS 576C	Applied Biostatistics Analysis (3)
BIOS 576D	Data Management and the SAS Programming Language (3)
BIOS 647	Analysis of Categorical Data (3)
BIOS 648	Analysis of High Dimensional Data (3)
BIOS 675	Clinical Trials and Intervention Studies (3)
EPID 677	Genetic Association Studies (3)
BIOS 684	General Linear and Mixed Effects Models (3)
BIOS 688	Statistical Consulting (3)
BIOS 686	Survival Analysis (3)
BIOS 687	Theory of Linear Models (3)
MATH 564	Theory of Probability (3)
MATH 566	Theory of Statistics (3)
STAT 571A	Advanced Statistical Regression Analysis (3)
STAT 571B	Design of Experiments (3)
STAT 675	Statistical Computing (3)

It is the responsibility of the student to have met prerequisites (if not already required for the student's Major), such as:

BIOS 576A	Biostatistics in Public Health
BIOS 576B	Biostatistics for Research



Department of Community, Environment and Policy

PhD in Environmental Health Sciences

Kelly Reynolds, MSPH, PhD – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/cep/ehs/faculty>

The PhD in Environmental Health Sciences is offered by the [Department of Community, Environment and Policy](#). Using an interdisciplinary approach, Environmental Health Sciences examines the critical link between environmental and occupational exposures and human health.

The degree prepares individuals to research, evaluate, and control health risks posed by chemical and biological contaminants and physical exposures (noise, heat and radiation) in communities and occupational environments. Students will receive advanced training and experience in the application of epidemiological and community-based research methods, statistical analysis, exposure assessment, environmental modeling, toxicology, and intervention design. Graduates of this program will apply theory and methods to public health research, evaluation, analysis and decision-making.

The Doctorate in Environmental Health Sciences trains students for research careers and leadership roles in academia, government agencies, research institutes, consulting firms and industry. The program is designed for individuals with a variety of scientific backgrounds. Our faculty and students come from diverse backgrounds with advanced training in: medicine, ecology and evolutionary biology, geology, microbiology, engineering, architecture, nutrition, and policy.

Entry into the PhD program requires successful completion of a master's degree in a related field. The PhD program requires approximately three to five years for completion. At least 45 credits are required for the major, plus a minimum of 18 dissertation units, and at least 9 units for a minor in another department. The course of study and dissertation will be developed by the student, the faculty advisor and their committee. The PhD requires at least 72 credits (including a minimum of 18 units of electives; a minimum of 18 dissertation units, and a minimum of 9 units for the minor).** The overall course of study will be developed by the student and the faculty advisor and approved by the student's Graduate Committee and the Environmental Health Sciences Program Director.



Required Courses for the PhD in EHS Curriculum:

Required Major Courses: (27 units)

EPID 573A	Basic Principles of Epidemiology (3)
BIOS 576A	Biostatistics in Public Health (3)
BIOS 576B	Biostatistics for Research (3)
EHS 584	Fundamentals of Industrial and Environmental Health (3)
EHS 502	Environmental Monitoring and Analysis (3)
EHS 585	Public Health Fundamentals for Researchers (3)*
EHS 653	Applied Exposure Assessment (3)
HPS 609	Evaluating Public Health Literature (1)
EHS 696R	Environmental Health Seminar (1 unit each semester – 5 times)

* (or advisor approved substitution)

Elective Courses: Minimum of 18 elective units required for the PhD; (approved by faculty mentor). Students select courses in areas of emphasis: Exposure Science and Risk Assessment; Climate and Health; Environmental Contaminant Modeling; and Occupational Health and Safety.

Minor Courses = minimum of 9 units **

Environmental Health Sciences students must complete a minor of at least 9 units from another area of study. Minors that may interest students in this program include: Biostatistics, Epidemiology, Water Quality, Global Climate Change, Environmental Planning, Applied Mathematics, Engineering, Atmospheric Sciences, and Soil, Water and Environmental Science, just to name a few. With committee approval, a minor may be selected from any program of study at the University of Arizona that offers a doctoral degree.

**Requirements for a PhD minor in individual departments may vary. Required elective hours will be reduced if the minor exceeds 9 units.

Dissertation – minimum of 18 units required

PhD in Environmental Health Sciences Total Minimum Credit Requirements (72 units)



PhD Minor in Environmental Health Sciences

The PhD minor in Environmental Health Sciences is for majors outside Environmental Health Sciences and is administered by the Environmental Health Sciences (EHS) concentraton in MEZCOPH. **A total of 15 course units are required** as well as successful completion of written and oral questions during the PhD comprehensive exam and successful defense of the dissertation. Consult the UA catalog for further details on the current course schedule and specific course requirements.

PhD Minor in Environmental Health Sciences Requirements:

Total Minimum Credit Requirements 15 units including:

- EHS 502 Environmental Monitoring Methods (3)
- EHS 518 Introduction to Human Health Risk Assessment (3)
- EHS 584 Fundamentals of Industrial and Environmental Health (3)
- 2 additional courses (3 units each) approved by the EHS Minor Faculty Advisor (6)

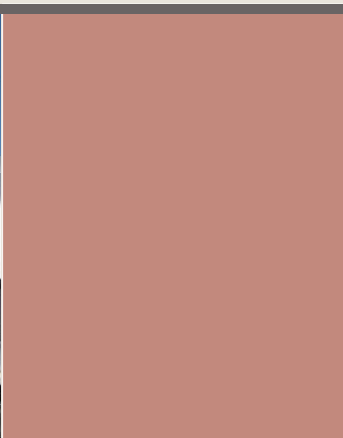
A list of EHS courses can be found obtained from the EHS Program Director and are listed in the UA catalog under the Environmental Health Sciences.

Transfer of Credits for the PhD Minor

Graduate credit earned at other approved institutions may be counted toward fulfilling the PhD Minor requirements, if approved by the minor faculty mentor, the section chair of the Environmental Health Sciences Section and the student's graduate committee. All transferred credit must be at the graduate level with a grade of A or B. The Doctoral Plan of Study requires a listing of all courses the student seeks to transfer from another institution. See the Graduate College website for further details.

Declaration of Minor

Meet with the Environmental Health Sciences Program Director to discuss the minor. Complete the MEZCOPH Declaration of Doctoral Minor Form; identify an Environmental Health Sciences Minor Faculty Advisor; and seek EHS Faculty Approval through the Environmental Sciences Program Director. The Declaration of Minor form must be filed with the MEZCOPH Academic Progress Coordinator, in the MEZCOPH Office of Student Services (Drachman Hall, Room A302).



Department of Epidemiology and Biostatistics

PhD in Epidemiology

Kacey Ernst, PhD, MPH – *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/epi-bio/primary-faculty>



The PhD in Epidemiology is offered by the [Department of Epidemiology and Biostatistics](#). [Epidemiology](#) is the scientific discipline concerned with the causes and prevention of human disease. Epidemiology focuses on the occurrence of disease among human populations, considering changes within populations over time and differences among and between populations in disease risk. Epidemiologists today are involved in attempts to understand the causes and means of controlling AIDS and other infectious diseases, as well as chronic diseases including cancer and coronary heart disease. Much of our understanding of the links between sexual practices and AIDS risk, of smoking and cancer, of serum cholesterol and coronary heart disease, of obesity and mortality risk and of air pollution and chronic lung disease derives from epidemiologic studies.

The PhD in Epidemiology trains individuals for careers in research and teaching in academic settings, research institutes, government agencies and industry. It has been designed for students whose careers will focus on conducting investigator-initiated and collaborative epidemiologic research. On average, the doctoral program requires approximately four to five years for completion. The first two years of this time are usually devoted to coursework, the qualifying exam, the comprehensive doctoral examinations, and development of doctoral research. The program is research oriented and centers on a major research project.

PhD Course Requirements

At least 46 units are required for the major (including up to 10 units of independent study), plus a minimum of 18 dissertation units, and at least 9 units minimum for the minor (depending on minor department requirements). Consult the course listings for further details on the specific course requirements and schedules. The overall course of study will be developed by the student and the advisor and approved by the student's Graduate Committee and the Epidemiology Program Director. Students will be required to defend their dissertation through a public presentation and oral examination with their committee. Please refer to the Epidemiology Student Handbook for additional information.

PhD in Epidemiology Curriculum:

Required Major Courses (32 units)

EPID 573A	Basic Principles of Epidemiology (3)
EPID 573B	Epidemiologic Methods (3)
EPID 573C	Advanced Epidemiology (3)
BIOS 576A	Biostatistics in Public Health (3)
BIOS 576B	Biostatistics for Research (3)
EPID 585	Public Health Fundamentals for Researchers (3)
PHCL 595B	Scientific Writing, Presentation and Bioethics (2)
HPS 609	Evaluating the Public Health Literature (1 unit, <i>fall semester of first year</i>)
EPID 660	Infectious Disease Epidemiology (3)
EPID 670	Chronic Disease Epidemiology (3)
EPID 696A	Epidemiology Seminar (1 unit – 3 times) (or equivalent approved by Faculty Advisor)
EPID 796A	Epidemiology Doctoral Seminar (1 unit – 2 times)

Electives (14 or more units required; 9 of which must be in Epidemiology/Biostatistics, with at least (3) BIOS units in a Biostatistics course beyond BIOS 576B).

Note: maximum of 10 units of Independent Study/Research Credit (EPID 599, 699, 799, 900).

Minor Courses - According to Graduate College Policy, PhD students must choose at least one supporting minor subject, in addition to the major subject. The selection of a minor subject area is the responsibility of the student, in consultation with their faculty advisor and/or Graduate Committee Chair. The minor area of study specifies the number of required minor units and examinations (**minimum required= 9 units**).

Dissertation – EPID 920 - minimum of 18 units required

PhD in Epidemiology Total Minimum Credit Requirements (73 units)



PhD Minor in Epidemiology

The PhD minor in Epidemiology is designed for individuals from other University of Arizona doctoral degree programs who wish to obtain graduate training in Epidemiology. A member of the primary Epidemiology faculty will serve as the Minor Advisor and sit on the student's graduate committee.

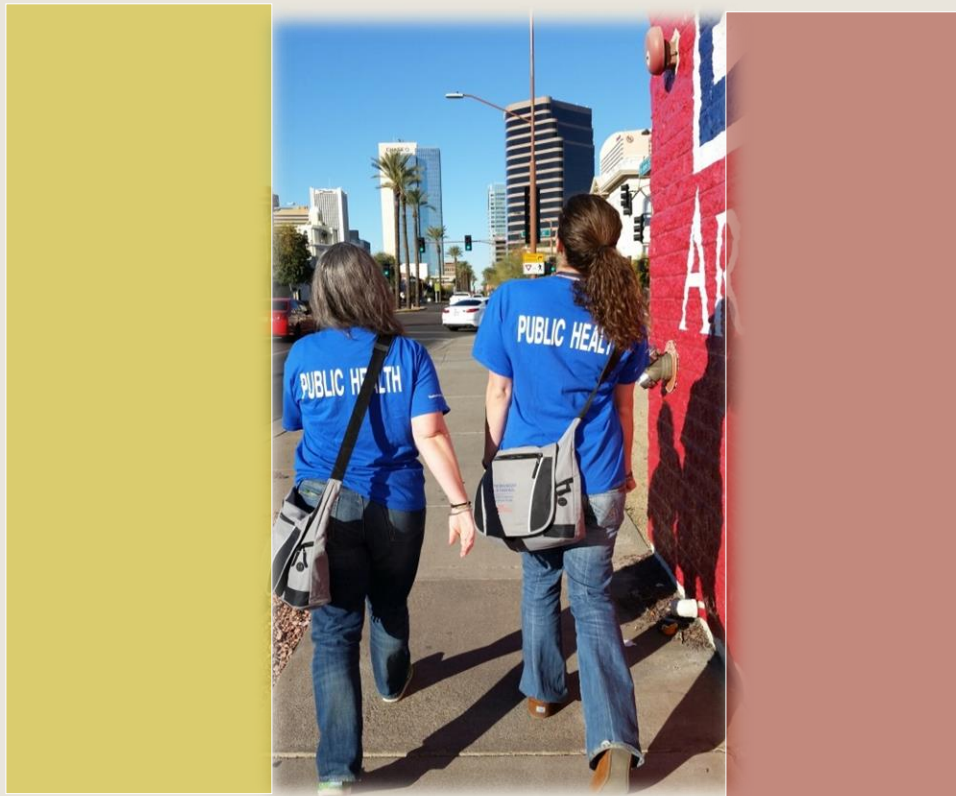
The PhD minor in Epidemiology is administered by the Epidemiology Graduate Program. A total of **15 course units** are required (see the course listings for further details on the specific course requirements and schedule).

Required PhD Minor in Epidemiology Courses (at least 15 units)

EPID 573B	Epidemiologic Methods (3)*
EPID 573C	Advanced Epidemiology (3)
BIOS 576A	Biostatistics for Public Health (3)
BIOS 576B	Biostatistics for Research (3)
EPID Elective	The elective must be 600-level or above (to be approved by Epidemiology Minor Advisor) (3)

Note on required PhD minor in Epidemiology coursework:

- ***Minor course prerequisites:** It is the responsibility of the student to have met course prerequisites (if not already required for the student's major): *EPID 573A, Basic Principles of Epidemiology
- **Minor GPA requirement:** 3.5/4.0 scale in the required PhD Minor in Epidemiology courses.



Department of Health Promotion Sciences

PhD in Health Behavior Health Promotion



Scott Carvajal PhD, MPH, *Program Director*

Faculty: <https://publichealth.arizona.edu/departments/hps/primary-faculty>

The PhD in Health Behavior Health Promotion (HBHP) is offered by the [Department of Health Promotion Sciences](#). The doctoral degree program in Health Behavior Health Promotion will have an emphasis on the biological, behavioral, and socio-cultural determinants of health and health behavior, and the interventions and policies aimed at improving community and population health. The PhD program includes instruction in behavioral sciences, public health practice and policy, human services, and research methods. The doctoral program will offer a diverse and challenging curriculum that addresses health behavior health promotion theory; knowledge and skills for working on health issues within the diverse communities of the Southwestern United States; mixed qualitative and quantitative research methods; statistics, and grant development skills. Students will further specialize in one or more areas by methodology (applicable quantitative and qualitative methods) and/or topic--examples include promoting population health equity in one or more underserved communities of the State or developing/testing theory-based healthy lifestyle promotion interventions.

The requirement for entry into the PhD will be a bachelor's degree. Outstanding course performance and strong evidence for research interest and aptitude in health behavior health promotion is required for all admitted students. Applicants without a prior related master's degree will complete a Master of Science in Public Health (MSPH) in route to their PhD in Health Behavior Health Promotion. For students admitted to the PhD program without a prior related master's degree, the MSPH develops the student's ability to think critically, develop and execute research, while also providing depth in health behavior health promotion, epidemiology and biostatistics. These skills are essential to the success of a future PhD student and future health promotion health behavior scholar. Students are expected to complete the MSPH as a required component of this program when entering without a prior master's degree. A total of 30 units of MSPH coursework may apply toward the PhD provided the student received A or B grades in those units.

The MSPH is not a stand-alone degree. Students interested in graduate studies in health behavior health promotion, who are uncertain of a research career focus, are encouraged to discuss applying for the Master of Public Health (MPH) with department faculty and MEZCOPH's Office of Student Affairs. The MPH with a concentration in HBHP affords sound preparation for the PhD program, while foremost being designed as a functional terminal degree for immediate workforce entry.

The doctoral program requires approximately four to five years for completion. The first two years of this time are usually devoted to coursework, the comprehensive doctoral examinations, and development of doctoral research. The program is research oriented and centers on a major research project. The overall course of study is developed by the student and the Faculty Advisor, and is approved by the student's Graduate committee and the Health Behavior Health Promotion Program Director. Students will be required to defend their dissertation through a public presentation and oral examination with their committee.

PhD in Health Behavior Health Promotion Curriculum:

For students entering **with** a master's degree, the PhD curriculum will require a minimum of 63 credit hours (units). Of these, 18 units are required from major courses; 3 units are required on US minority/health disparities; 3 units on health promotion research content electives; 12 units of other electives; 9 units (minimum) for the minor; and 18 units for the dissertation. A maximum of 30 units from a prior degree may be applied towards an admitted student, pending review by the student's advisory committee. The **63 unit** curriculum is detailed below:

Required Major Courses (18 units)



BIOS 576B	Biostatistics for Research (3) *
HPS 585	Public Health Fundamentals for Researchers (3) +
HPS 607	Qualitative Research Methods in Public Health (3)
HPS 609	Evaluating the Public Health Literature (1)
HPS 620A	Advanced Research Methods in Health Promotion I (3) §
HPS 620B	Advanced Research Methods in Health Promotion II (3) §
HPS 696L	Health Behavior Health Promotion Seminar (1 unit; 2 times) §

Required US Minority/Health Disparities Course (minimum **3 units**)

HPS 535	Multicultural Health Beliefs (3) or
HPS 605	Community Based Participatory Action Research to Decrease Health Disparities (3)

* **Note:** BIOS 576A or other introductory graduate statistics course is a prerequisite for BIOS 576B. Another graduate statistics course beyond an introductory graduate statistics course and with a minimum coverage of multiple linear/GLM or logistic regression may be considered with approval of the student's Faculty Advisor and the Program Director.

+ For students who have met the core competencies in HPS 585 through prior courses, for example, as would be expected in a prior degree, minor or certificate in public health, an elective may be taken in lieu of this course.

§ Permanent courses addressing this content as assessed by the Program Director are acceptable substitutions.

Required Health Promotion Emphasis Electives (minimum of **3 units**) ***

HPS 531	Contemporary Health Issues & Research (3)
HPS 532A	Applied Aspects of Program Planning, Implementation & Evaluation I (4)
HPS 535	Multicultural Health Beliefs (3) **
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
HPS 605	Community Based Participatory Action Research to Decrease Health Disparities (3) **
HPS 622	Applied Research Methods in Diet and Physical Activity (3)
HPS 642	Public Health Communications (3)
EPID 671	Social Epidemiology (3)
EPID 646	Measurement Issues in Epidemiology (3)

** (if not already used to fulfill the US minority health/disparities requirement)

*** Another health promotion related graduate course may be substituted with approval of the student's Faculty Advisor

Other Electives (minimum 12 units; Approved by Faculty Advisor/Doctoral Committee)
These electives will often be independent studies with a research focus, public health graduate courses, or other graduate theory, content or methodology-related courses at the University, relevant to the doctoral area of study).

Minor (minimum 9 units)

Each PhD student must complete a minimum of 9 credit hours of course work in a minor area. The minor area of study specifies the number of required minor units. This should consist of a coherent set of courses in an area (or in related areas) of health behavior health promotion, in consultation with the PhD student's faculty advisor and/or Graduate Committee Chair. These courses may be from more than one program.

Dissertation – HPS 920 - minimum of 18 units required

**PhD in Health Behavior Health Promotion - Total Minimum Credit Requirements:
63 units**

Master of Science in Public Health (MSPH)/PhD in Health Behavior Health Promotion:

For students entering **without** a master's degree, the PhD curriculum will require a minimum of 73 credit hours (units), with 40 units required toward completing the **Master of Science in Public Health (MSPH)**. The MSPH component requires 25 required major course credits; 3 units are required on US minority/health disparities; 6 units of other electives; and 6 units of thesis. Additional required units post completion of the MSPH include 2 additional major units, 4 additional selective units, 9 units (minimum) for the minor, and 18 units for the dissertation, allowing for a maximum of 30 units to be shared between the MSPH and PhD. Additionally, a maximum of 8 units from prior graduate coursework (6 units from a prior awarded degree) may be considered (pending review) to be applied towards the MSPH component.

Requirements for MSPH to PhD in Health Behavior Health Promotion for students entering without a prior master's degree:

Master of Science in Public Health (MSPH) requirements (40 units)

Required Major Courses (25 units)

HPS 531	Contemporary Health Issues & Research (3)
HPS 585	Public Health Fundamentals for Researchers (3)
BIOS 576A	Biostatistics in Public Health (3)
BIOS 576B	Biostatistics for Research (3) *
HPS 607	Qualitative Research Methods in Public Health (3)
HPS 620A	Advanced Research Methods in Health Promotion I (3) §
HPS 620B	Advanced Research Methods in Health Promotion II (3) §
HPS 696L	Health Behavior Health Promotion Seminar (1)
HPS Selective Course (minimum of 3 units)	
(may be met with any HPS offered 3+ unit, 500+ level course (e.g. HPS 532A; 535; 577; 605; 619; 622; 642) or another health promotion related course (e.g. EPID 573A; EPID 646; EPID 671; COMM 669) approved by Faculty Advisor	



Required US Minority/Health Disparities Course (minimum 3 units)

HPS 535** Multicultural Health Beliefs) (3) **Or**

HPS 605** Community Based Participatory Action Research to Decrease Health Disparities (3)

Other Electives - minimum of 6 units (approved by Faculty Advisor)

Required Master's Thesis: HPS 910 - minimum of 6 units

Additional core requirements for the PhD post completion of the MSPH (33 units)

Required Courses - (6 units)

HPS 609 Evaluating the Public Health Literature (1)

HPS 696L HBHP Seminar (1) §

HPS Selective Course (minimum of 4 units)

* **Note:** BIOS 576A or other introductory graduate statistics course is a prerequisite for BIO 576B. Another graduate statistics course beyond an introductory graduate statistic course and with a minimum coverage of multiple linear/GLM or logistic regression may be considered with approval of the student's Faculty Advisor and the Program Director.

** (if not already used to fulfill the US minority health/disparities requirement)

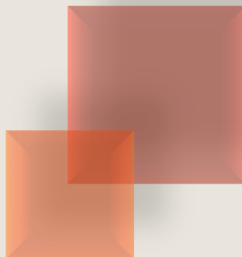
§ Permanent courses addressing this content as assessed by the Program Director are acceptable substitutions.

Approved Minor - minimum of 9 units required

Each PhD student must complete a minimum of 9 credit hours of course work in a minor area. The minor area of study specifies the number of required minor units. This should consist of a coherent set of courses in an area (or in related areas) of health behavior health promotion, in consultation with the student's faculty advisor and/or Graduate Committee Chair. These courses may be from more than one program.

Dissertation – HPS 920 – minimum of 18 units required

MSPH/PhD in Health Behavior Health Promotion - Total Minimum Credit Requirements: 73 units



PhD Minor in Health Behavior Health Promotion

The PhD minor in Health Behavior Health Promotion (HBHP) is designed for individuals from other University of Arizona doctoral degree programs who wish to obtain graduate training in Health Behavior Health Promotion and is administered by the Department of Health Promotion Sciences in the Zuckerman College of Public Health.

A total of **12 course units** are required, as well as successful completion of written and oral questions during the PhD Comprehensive exam, and successful defense of the dissertation. Consult the UA catalog and UA schedule of classes for further details and specific course requirements.

Required PhD Minor in Health Behavior Health Promotion Courses (at least 12 units):

Take one course from the following:

HPS 577 Sociocultural & Behavioral Aspects of Public Health (3)

Choose one course on US Minority Health/Health Disparities: * (minimum 3 units)

HPS 535 Multicultural Health Beliefs (3) **OR**

HPS 605 Community Based Participatory Action Research to Decrease Health Disparities (3)

* or alternate course with a core focus on a US minority health issue or health disparities with minor faculty advisor approval

Choose two courses on health promotion sciences related content (minimum 6 units) – (3) §

§ All HPS led graduate courses are acceptable. Other public health/health promotion related courses within or outside the College require minor faculty advisor's approval.

