

# ACADEMIC CURRICULUM GUIDE



2021-2022



THE UNIVERSITY OF ARIZONA

Mel & Enid Zuckerman  
College of Public Health



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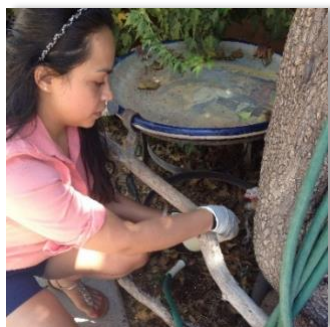


# WHAT IS PUBLIC HEALTH?

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 (emphasis) in Environmental and Occupational Health, Global Health, Health Promotion, Health Systems Theory and Practice, One Health, Public Health Practice, and Quantitative Methods in Public Health. 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 Bachelor of Science (BS) with a major in Public Health addresses general curriculum and foundational domains, competencies, cumulative and experiential activities, and cross-cutting concepts which can be found on the [program website](#).

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.

Starting in the 2021-2022 academic year, pending university-level approval, all students will enter the program as declared Public Health majors, and the College will remove the pre-public health major designation. In order for the student to achieve advanced standing and be eligible to take 400-level courses, they will have to meet the following criteria:

- University of Arizona GPA of 2.0 or higher;
- Completion of public health prerequisite courses with a C or higher; and
- Completion of the advanced standing application.

## BS – Major in Public Health Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES** - (36 units; grade of C or higher required)

ENGL 307	Business Writing (3) <u>or</u> ENGL 308 Technical Writing (3) <u>or</u> HPS 307 Public Health Narratives (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)*
HPS 387	Health Disparities and Minority Health (3)
HPS 405	Biology in Public Health (3) *
HPS 433	Global Health (3)*
HPS 478	Public Health Nutrition (3)*
HPS 493A	Field Work in Public Health (6)*

### **EMPHASIS UNITS** - (minimum 12 units required; **Select one emphasis**)

#### **Environmental and Occupational Health Emphasis**

<b><u>REQUIRED:</u></b>	<b><u>EHS 484</u></b>	<b><u>Fundamentals of Industrial and Environmental Health (3)*</u></b>
<b>Select 9 units:</b>	HPS 401	Introduction to Mapping for Public Health (3)*
	HPS 409	Global Water, Sanitation, and Hygiene (WaSH) (3)*
	EHS 418	Introduction to Health Risk Assessment (3)*
	EHS 420	Environmentally Acquired Illnesses (3)*
	EHS 422	Introduction to Occupational Safety (3)*
	EHS 425	A Public Health Lens to Climate Change (3)*
	EHS 426	Topics in Environmental Justice (3)*
	EHS 439A	Outbreaks and Environmental Microbiology: Then to Now (3)*
	EHS 489	Public Health Preparedness (3)*

### **Global Health Emphasis**

Select 12 units:	HPS 401	Introduction to Mapping for Public Health (3)*
	HPS 404	Fundamentals of Evaluation (3)*
	HPS 409	Global Water, Sanitation, and Hygiene (WaSH) (3)*
	EPID 411	Health and Disease Across Time and the World (3)*
	HPS 416	The World's Food and Health (3)*
	HPS 417	Health Systems in Global Health (3)*
	EPID 479	Infections and Epidemics (3)*
	HPS 493C	Global Experience in Public Health (3)*
	<b>400-level</b>	Public Health Study Abroad opportunities

### **Health Promotion Emphasis**

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 409	Global Water, Sanitation, and Hygiene (WaSH) (3)*
	HPS 481	Health Education Intervention Methods (3)*
	HPS 497E	Public Health for Community Wellness (2)*
	HPS 497G	Open Airways for Schools (1)*
	HPS 497L	Public Health for School and Community Based Obesity Prevention (2)*

### **Health Systems Theory and Practice Emphasis**

Select 12 units:	HPS 402	Corporate Wellness (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)*
	HPS 417	Health Systems in Global Health (3)*
	PHP 421	Introduction to Public Health Law and Ethics (3)*
	PHPM 458	Health Care Marketing (3)*



## One Health Emphasis

<u>REQUIRED:</u>	<u>EPID/EHS 445</u>	<u>One Health Foundations (3)*</u>
	<u>EHS 446</u>	<u>One Health Approach and Case Studies (3)*</u>
Select 6 units:	HPS 409	Global Water, Sanitation, and Hygiene (WaSH) (3)*
	EHS 418	Introduction to Health Risk Assessment (3)*
	EHS 420	Environmentally Acquired Illness (3)*
	EHS 439A	Outbreaks and Environmental Microbiology (3)*
	EPID 479	Infections and Epidemics (3)*

## Public Health Practice Emphasis

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)*
	PHP 436	Aging, Environment, and Well-being (3)*
	PHP 437	Management and Leadership in Long-term Care (3)*
	PHP 440	Medicaid: Policy, Politics, and Practicalities of Access to Healthcare (3)*
	PHP 447	Case Studies in State Health Policy (3)*
	HPS 499	Independent Study (3)*

## Quantitative Methods in Public Health Emphasis

Select 12 units:	HPS 401	Introduction to Mapping for Public Health (3)*
	EPID 411	Health and Disease Across Time and the World (3)*
	EPID/BIOS 450	Health Data Acquisition, Assessment, and Integration (3)*
	BIOS/EPID 451	Health Data Management and Visualization (3)*
	BIOS/EPID 452	Health Data Analysis and Communication Methods (3)*
	EPID/BIOS 453	Health Data Science Practice (3)*
	EPID 479	Infections and Epidemics (3)*

## **PUBLIC HEALTH ELECTIVE UNITS** - (*minimum 9 units*)

HPS 300	Public Health in the 21st Century (3)
PHP 301	Introduction to Gerontology (3)
PHP 305	Population Health in the Digital Age (3)
HPS 306	Drugs and Society (3)
PHP 308	Community Health Education for Disease Outbreaks (3)

PHP 312	Health Promotion and Well-being Later in Life (3)
HPS 313	Health and Medicine in Classic Antiquity (3)
PHP 322	Health Education Ethical Leadership (3)
HPS 330	Human Sexuality (3)
CPH 399**	Independent Studies (1-4)
HPS 408	Disabilities and Public Health (3)*
HPS 425	Latino Health Disparities (3)
HPS 438A	Women's Health in Global Perspective (3)
HPS 444	Rethinking Race and Health in the United States (3)
HPS 449	Family Violence (3)*
HPS/PHP 487	Feminist Interpretations of Health (3)
CPH 491**	Preceptorship (1-3)
HPS 493B	(Elective) Internship in Public Health (1-6)*
HPS 495	Special Topics in Public Health (1-3)*
EPID 495	Special Topics in Epidemiology (1-3)*
HPS 497F	Community and School Garden Workshop (2-6)*
EPID 497S	Skin Cancer Prevention in the Community Setting (1-2)*
CPH 499**	Independent Studies (1-4)
CPH 498H**	Honors Thesis (3)

## **NOTES**

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

\* Enrollment requires advanced standing status.

\*\* CPH independent study courses can be taken from any program within the College of Public Health with course prefixes of BIOS, EHS, EPID, HPS, PHPM or PHP.

## **Bachelor of Science with a major in Public Health Curriculum: 57 units** **Total Minimum Requirement: 120 units**





# BACHELOR OF ARTS

## Bachelor of Arts in Wellness and Health Promotion Practice

Velia Leybas Nuno, PhD, MSW – Program Director

In alignment with the mission of the Mel and Enid Zuckerman College of Public Health, the Bachelor of Arts in Wellness and Health Promotion Practice will promote the health and wellness of communities across the southwest and globally.

The major in Wellness and Health Promotion Practice offers students the opportunity to develop the knowledge, ethics, and skills to provide professional services and interventions. As such, students learn to work with diverse populations at different ages and stages of life in order to promote a healthy lifestyle and overall wellness. For the purposes of this degree, wellness means a state of being in optimal health. Students learn to promote optimal wellness within themselves, among individuals, families and communities. Their practicum and internships are in a variety of settings such as homes, communities, governmental organizations, businesses, health care centers, hospitals, schools, faith-based organizations and other non-governmental organizations.

Students learn to conduct health needs and resource assessments, to plan health promotion services and interventions using appropriate evidence-based theories and models for behavior change, to implement and manage services and interventions, and to evaluate health promotion and wellness services and programming. Students learn skills and resources to support the care for their personal health and wellness. They become practitioners themselves prior to teaching, training and consulting others in health promotion and wellness.

In addition to course work, students complete a practicum and internship enabling the students to apply their knowledge and skills. Such experiences will enhance their competencies in service delivery, communication, advocacy for health promotion and optimal wellness as ethical professionals, leaders and managers. These skills prepare students to be work ready upon graduation.

Potential directions for students graduating with a BA in Wellness and Health Promotion Practice may be employment, certification, or graduate studies. Graduates can apply for certification as a certified health education specialist (CHES) through the National Commission for Health Education Credentialing <https://www.nchec.org/ches>. Potential graduate programs include, but are not limited to, public health, nursing, nutrition, and medicine.

## **BA – Major in Wellness and Health Promotion Practice Curriculum**

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED SUPPORTING COURSEWORK - (6 units)**

#### **Statistics - (select 3 units)**

BIOS 376                      Introduction to Biostatistics (3)

#### **Communication Skills - (select 3 units)**

COMM 113                    Introduction to Small Group Communication (3)  
COMM 114                    Introduction to Interpersonal Communication (3)  
COMM 117                    Culture and Communication (3)  
COMM 119                    Public Speaking (3)  
COMM 209                    Introduction to Communication Technology (3)  
COMM 313                    Communication and Public Relations (3)  
COMM 314                    Creative Professional Communication (3)

### **MAJOR CORE COURSES - (24 units)**

HPS 178                      Personal Health and Wellness (3)  
HPS 200                      Introduction to Public Health (3)  
PHP 210                      Diversity, Health and Wellbeing in Later Life (3)  
PHP 322                      Health Education and Ethical Leadership (3)  
HPS 404                      Fundamentals of Evaluation (3)  
EHS 425                      A Public Health Lens to Climate Change (3)  
HPS 403                      Applications in Health Promotion: Behavioral Theories & Health (3)  
HPS 4xx                      Stress Management for Health and Wellness (3)

### **APPLIED PRACTICE REQUIREMENTS - (9 units)**

#### **Practicum - (select 6 units)**

This practicum reflects *faculty supervised* group or individual field-based experiential learning. Choose from course list or talk with your advisor about additional options.

PHP 312                      Health Promotion and Well-being in Later Life (3)  
HPS 394                      Practicum (1-3)  
HPS 497E                    Public Health for Community Wellness (2)  
HPS/GEOG 497F            Community and School Garden Workshop (2-6)  
HPS 497L                    Public Health for School and Community Based Childhood Obesity Prevention Programming (2)  
EPID 497S                    Skin Cancer Prev. in Community Settings (1-2)

**Internship - (3 units)**

The required internship reflects preceptor-led (preceptor can be a primary HPS faculty member, community organization, healthcare or behavioral health setting, government organization, business, etc.), faculty-assessed, experiential learning experiences.

HPS 493                      Internship (3)

**ELECTIVE SUBPLANS - (minimum 15 units required; *Select one emphasis*)****Health and Wellness Emphasis**

Select 15 units:    SBS 301A              Foundations of Mindfulness (1)  
                         SBS 301B              Mindful Semester: Mindfulness-based Study Tools (1)  
                         SBS 301C              Mindful Semester: Mindfulness-based Movement (1)  
                         NSC 311                A Systems Approach to Obesity Prevention (3)  
                         NSC 320                Nutrition, Physical activity and Health Promotion (3)  
                         NSC 395B              Health Coaching (3)  
                         HPS 402                Corporate Wellness (3)  
                         HPS 405                Biology in Public Health (3)  
                         HPS 412                Public Health Approaches to Mental Health Disorders in the US (3)  
                         HPS 416                The World's Food and Health (3)  
                         PHPM 458              Health Care Marketing (3)  
                         HPS 478                Public Health Nutrition (3)  
                         HPS 486                Adolescent Health (3)

**Aging and Population Health Emphasis**

Select 15 units:    CHS/SOC 215          Sociology of Aging and Health (3)  
                         PHP 301                Introduction to Gerontology (3)  
                         PHP 305                Public Health in the Digital Age (3)  
                         PHP 312                Health Promotion and Well-being in Later Life (3)  
                         HPS 405                Biology in Public Health (3)  
                         HPS 412                Public Health Approaches to Mental Health Disorders in the US (3)  
                         FSHD 413              Issues in Aging (3)  
                         PHP 436                Aging, Environment and Wellbeing (3)  
                         PHP 437                Management and Leadership in Long-term Care (3)  
                         PHPM 458              Health Care Marketing (3)



## Health Education Emphasis

Select 15 units:	PHP 305	Public Health in the Digital Age (3)
	HPS 306	Drugs in Society (3)
	HPS 330	Human Sexuality (3)
	HPS 350	Principles of Health Education and Promotion (3)
	HPS 400	Contemporary Health Problems (3)
	HPS 405	Biology in Public Health (3)
	HPS 412	Public Health Approaches to Mental Health Disorders in the US (3)
	HPS 449	Family Violence (3)
	PHPM 458	Health Care Marketing (3)
	HPS 481	Health Education Intervention Methods (3)

**Bachelor of Arts in Wellness and Health Promotion Practice: 54 units in major**  
**Total Minimum Requirement: 120 units**



## Undergraduate Minor in Public Health Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

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

Admission to the minor requires a minimum 2.0 GPA, and the student's minor GPA must be at least a 2.0 at the time of graduation. 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 <sup>st</sup> Century (3)
PHP 301	Introduction to Gerontology (3)
PHP 305	Population Health in the Digital Age (3)
HPS 306	Drugs and Society (3)
PHP 308	Community Health Education for Disease Outbreaks (3)
PHPM 310	Health Care in the US (3)
PHP 312	Health Promotion and Well-being Later in Life (3)
HPS 313	Health and Medicine in Classic Antiquity (3)
PHPM 310	Health Care in the US (3)
PHP 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 409	Global Water, Sanitation, and Hygiene (WaSH) (3)**
EPID 411	Health and Disease Across Time and the World (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)**
HPS 417	Health Systems in Global Health (3)**
EHS 418	Introduction to Health Risk Assessment (3)**
EHS 420	Environmentally Acquired Illnesses (3)**
PHP 421	Introduction to Public Health Law and Ethics (3)**
EHS 422	Introduction to Occupational Safety (3)**
HPS 425	Latino Health Disparities (3)
EHS 426	Topics in Environmental Justice (3)**
HPS 433	Global Health (3)**
PHP 436	Aging, Environment, and Well-being (3)**
PHP 437	Management and Leadership in Long-term Care (3)**
HPS 438A	Women's Health in Global Perspective (3)
EHS 439A	Outbreaks and Environmental Microbiology: Then to Now (3)**
PHP 440	Medicaid: Policy, Politics, and Practicalities of Access to Healthcare (3)**
HPS 444	Rethinking Race and Health in the United States (3)
EPID/EHS 445	One Health Foundations (3)**
EHS 446	One Health Approach and Case Studies (3)**
PHP 447	Case Studies in State Health Policy (3)**
HPS 449	Family Violence (3)**
EPID/BIOS 450	Health Data Acquisition, Assessment, and Integration (3)**
BIOS/EPID 451	Health Data Management and Visualization (3)**
BIOS/EPID 452	Health Data Analysis and Communication Methods (3)**
EPID/BIOS 453	Health Data Science Practice (3)**
PHPM 458	Health Care Marketing (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 495	Special Topics in Public Health (1-3)**
HPS 497E	Public Health for Community Wellness (2)**
HPS 497F	Community and School Garden Workshop (2-6)**
HPS 497G	Open Airways for Schools (1)**
HPS 497L	Public Health for School and Community Based Obesity Prevention (2)**
EPID 497S	Skin Cancer Prevention in the Community Setting (1-2)**
CPH 498+	Honors Thesis (1-3)**
CPH 499+	Independent Studies (1-4)**

### **NOTES**

\* Some elective courses may have additional prerequisites.

\*\* Contact your minor advisor for enrollment.

+ CPH independent study courses can be taken from any program within the College of Public Health with course prefixes of BIOS, EHS, EPID, HPS, PHPM or PHP.



## Undergraduate Minor in Population Health Data Science Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 18 units are required for the undergraduate minor in Population Health Data Science.***

Admission to the minor requires a minimum cumulative 2.5 GPA. Course prerequisites to the program include: College Algebra (e.g. MATH 112) or higher-level MATH course.

### **DESCRIPTION:**

The vision of the minor, Population Health Data Science, is to introduce students to the fundamentals of data science in the health sciences. Data science is emerging as a leading area for job growth over the next decade in the health sector. Expansion of health data sources, including electronic medical records and non-traditional health surveillance data necessitate the training of individuals who have an understanding both of the underlying dynamics of health and medicine and also skills in how to manage, analyze, interpret big data, and collaborate with higher level data scientists. We envision providing students with an introduction to the basics of how to apply data science to population health questions. The minor will be administered to be accessible both to individuals coming from the health fields including nursing, pharmacy, and medicine to learn about data science and for those coming from data science, math, computer science, neuroscience, and other disciplines to learn to about how to address issues in public health using appropriate data science tools.

***NOTE:*** Public Health majors ***cannot*** also be in the Data Science Minor.

### **REQUIRED - (18 units)**

EPID 309	Introduction to Epidemiology (3)
BIOS 376	Introduction to Biostatistics (3)
EPID/BIOS 450	Health Data Acquisition, Assessment, and Integration (3)
BIOS/EPID 451	Health Data Management and Visualization (3)
BIOS/EPID 452	Health Data Analysis and Communication Methods (3)
EPID/BIOS 453	Health Data Science Practice (3)



## Undergraduate Minor in Wellness & Health Promotion Practice Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 18 units are required for the undergraduate minor in Wellness and Health Promotion Practice.***

### **DESCRIPTION:**

The minor in wellness and health promotion practice teaches students to work with diverse populations at different ages and stages of life in order to promote a healthy lifestyle and overall wellness. For the purposes of this minor, wellness means a state of being in optimal health. Required courses emphasize *personal* health and wellness as a foundation for life and future employment. Students learn to evaluate health promotion and wellness services and programming to assess whether programs are improving health. The minor offers a wide assortment of electives allowing students to customize courses to fit with their areas of interest. Several courses are available to develop skills in aging, mindfulness, and health education.

***NOTE:*** Public Health BS majors may only double-use HPS 178 towards the major and minor requirements.

### **REQUIRED - (6 units)**

HPS 178	Personal Health and Wellness (3)
HPS 404	Fundamentals of Evaluation (3)

### **ELECTIVES - (select 12 units)**

HPS 200	Introduction to Public Health (3)
PHP 210	Diversity, Health and Wellbeing in Later Life (3)
CHS/SOC 215	Sociology of Aging and Health (3)
PHP 301	Introduction to Gerontology (3)
SBS 301A	Foundations of Mindfulness (1)
SBS 301B	Mindful Semester: Mindfulness-based Study Tools (1)
SBS 301C	Mindful Semester: Mindfulness-based Movement (1)
PHP 305	Public Health in the Digital Age (3)
HPS 306	Drugs in Society (3)
NSC 311	A Systems Approach to Obesity Prevention (3)
PHP 312	Health Promotion and Well-being in Later Life (3)
NSC 320	Nutrition, Physical activity and Health promotion (3)
PHP 322	Health Education and Ethical Leadership (3)
HPS 330	Human Sexuality (3)
HPS 350	Principles of Health Education and Promotion (3)

NSC 395B	Health Coaching (3)
HPS 400	Contemporary Health Problems (3)
HPS 402	Corporate Wellness (3)
HPS 403	Applications in Health Promotion: Behavioral Theories & Health (3)
HPS 405	Biology in Public Health (3)
HPS 412	Public Health Approaches to Mental Health Disorders in the US (3)
FSHD 413	Issues in Aging (3)
HPS 416	The World's Food and Health (3)
EHS 425	A Public Health Lens to Climate Change (3)
PHP 436	Aging, Environment and Wellbeing (3)
PHP 437	Management and Leadership in Long-term Care (3)
HPS 449	Family Violence (3)
PHPM 458	Health Care Marketing (3)
HPS 478	Public Health Nutrition (3)
HPS 481	Principles of Health Education and Promotion (3)
HPS 486	Adolescent Health (3)



## Undergraduate Minor in Global Health Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 18 units are required for the undergraduate minor in Global Health. At the declaration of this minor, a minimum cumulative GPA of 2.0 is required.***

### **DESCRIPTION:**

Global health is an area for study, research, and practice that places priority on improving health and achieving health equity for all people worldwide. Given the increased awareness of the need for shared solutions to shared problems of humanity, as we have recently seen in the case of the COVID-19 pandemic, opportunities in global health work abound. A Global Health minor will equip individuals who desire to work in this field with knowledge and skills to identify and delineate critical health and human development issues. Careers in global health present the opportunity to work with people from different backgrounds and to help those in need around the world.

***NOTE:*** Students may apply 6 units toward the BS in Public Health major.

### **REQUIRED** - (15 units)

HPS 3xx	Introduction to Program Evaluation in Global Health (3)
HPS 433	Global Health (3)
HPS 409	Global Water, Sanitation and Hygiene (WaSH) (3)
HPS 459	Management of Global Public Health Emergencies (3)
HPS 417	Health Systems in Global Health (3)

### **ELECTIVES** - (select 3 units)

EPID 309	Introduction to Epidemiology (3)
EPID 411	Health and Disease Across Time and the World (3)
HPS 493C	Global Experience in Public Health (1-3)
EHS 425	Public Health Lens to Climate Change (3)
EHS 420	Environmentally Acquired Illnesses (3)
HPS 400-801	Contemporary Community Health Problems (Study Abroad Section) (3)
PHPM 415	Strategic Planning (3)
HPS 404	Fundamentals of Evaluation (3)
HPS 416	The World's Food and Health (3)

## Undergraduate Minor in Aging and Population Health Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 18 units are required for the undergraduate minor in Aging and Population Health.***

### **DESCRIPTION:**

The Aging and Population Health Curriculum is designed to prepare students to tackle the complex challenges and manage the opportunities that arise in addressing the health and wellbeing needs endemic to an aging population through a population health perspective and using a multi-disciplinary approach. Multi-disciplinarity is central to this curriculum because of the multifactorial nature of contributors (health, social, economic, etc.), to health and well-being in later life.

The minor in Aging and Population Health aims to provide students with the foundational knowledge necessary to conceptualize, understand and address the health and wellbeing needs of an aging population in a diverse and broad range of health-related and social professional settings, aging and long-term care industry, as well as prepare students for further or advanced studies. Students will take core and elective courses taught by a multi-disciplinary team of faculty with expertise in aging studies/gerontology, healthcare, public health, psychology and sociology.

***NOTE:*** BA in Wellness and HP Practice majors cannot also be in the Aging and Population Health minor

### **REQUIRED** - (15 units)

PHP 210	Diversity, Health and Wellbeing in Later Life (3)
PHP 301	Introduction to Gerontology (3)
PHP 312	Health Promotion and Well-being in Later Life (3)
PHP 436	Aging, Environment and Wellbeing (3)
PHP 437	Management and Leadership in Long-term Care (3)

### **ELECTIVES** - (select 3 units)

CHS/SOC 215	Sociology of Aging and Health (3)
HPS 405	Biology in Public Health (3)
HPS 412	Public Health Approaches to Mental Health Disorders in the US (3)
FSHD 413	Issues in Aging (3)
PHPM 458	Health Care Marketing (3)

## Undergraduate Minor in Environmental & Occupational Health Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

**Program will be effective pending university level approval starting in the 2021-2022 academic year.**

***A minimum of 18 units are required for the undergraduate minor in Environmental & Occupational Health. At the declaration of this minor, a minimum cumulative GPA of 2.0 is required.***

### **DESCRIPTION:**

Environmental health is a multidisciplinary field focusing on understanding the effect of the environment and occupational exposure on human health. Environmental Health professionals are trained to diagnose, intervene and prevent public health threats such as air and water pollution, food safety, workers safety, waste managements and many others, as well as emerging public health threats, including new foodborne, waterborne or airborne illnesses and exposures. A minor in EOH will prepare students for job opportunities in industrial settings, with local, tribal, state, national and international health departments/agencies. Others may work with non-governmental organizations, or relief agencies to address environmental and occupational determinants of health and promote population health.

***NOTE:*** Students may apply 6 units toward the BS in Public Health major.

### **REQUIRED** - (15 units)

EPID 309	Introduction to Epidemiology (3)
EHS 375	Introduction to Environmental and Occupational Health (3)
EHS 418	Introduction to Human Health Risk Assessment (3)
EHS 439A	Outbreaks and Environmental Microbiology (3)
EHS 425	Public Health Lens to Climate Change (3)
	<b>-OR-</b> EHS 484 Fundamentals of Industrial and Environmental Health (3)

### **ELECTIVES** - (select 3 units)

HPS 409	Global Water, Sanitation and Hygiene (WaSH) (3)
HPS 401	Introduction to Mapping for Public Health (3)
EHS 420	Environmentally Acquired Illnesses (3)
EHS 489	Public Health Preparedness (3)
EHS 484	Fundamentals of Industrial and Environmental Health (3)
EHS 426	Topics in Environmental Justice (3)
EHS 422	Safety Fundamentals (3)
EPID 411	Health and Disease Across Time and the World (3)
HPS 459	Management of Global Public Health Emergencies (3)



## Undergraduate Minor in One Health Curriculum

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***A minimum of 18 units are required for the undergraduate minor in Aging and Population Health. At the declaration of this minor, a minimum cumulative GPA of 2.5 is required.***

### **DESCRIPTION:**

The One Health curriculum is designed to prepare students to tackle complex challenges in addressing zoonotic diseases. This discipline is even more relevant in our current time where the world is trying to address the novel Corona virus (COVID-19) pandemic. The minor in One Health aims to prepare students to have the foundational knowledge in One Health that can be applied in different settings for disease prevention while preparing others to pursue an advanced degree. Students will take courses in different disciplines within the College and some electives outside the College. The College of Public Health has faculty expertise in different One Health relevant areas including Environmental Health Sciences, Epidemiology, Biostatistics, Global Health, Health Behavior and Health Promotion to name a few. All these disciplines are reflected in the proposed curriculum.

***NOTE:*** Public health majors cannot also be in the One Health minor.

### **REQUIRED** - (15 units)

EHS 100	One Health in Action (3)
EPID 309	Introduction to Epidemiology (3)
EPID/EHS 445	One Health Foundations (3)
EHS 446	One Health Approach and Case Studies (3)
EHS 425	Public Health Lens to Climate Change (3)

### **ELECTIVES** - (select 3 units)

HPS 409	Global Water, Sanitation and Hygiene (WaSH) (3)
EHS 418	Introduction to Human Health Risk Assessment (3)
EHS 420	Environmentally Acquired Illnesses (3)
AIS 431A	Traditional Ecological Knowledge (3)
EHS 439A	Outbreaks and Environmental Microbiology: Then to Now (3)
ENV 477	Principles of Ecotoxicology (3)
EHS 489	Public Health Preparedness (3)

**Effective for those following the 2021/2022 academic curriculum guide**

## Undergraduate Certificate in One Health Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 12 units are required for the undergraduate certificate in One Health. At the declaration of this certificate, students must have completed MATH 109C – College Algebra or higher and have a minimum cumulative GPA of 2.0.***

### **DESCRIPTION:**

The Undergraduate Certificate in One Health will provide the current and future public health workforce professional additional knowledge and skills regarding the protection of the public's health by being able to create better surveillance on the interaction between human health, animal health and the environment. Students will be able to complete the 12 unit program in one year. The Public Health workforce will upgrade their knowledge and skills regarding the importance of epidemiology, the environment, outbreaks and disease prevention and surveillance as in relation to protecting the Public's Health.

***NOTE:*** No more than 50% of the units of credit used to complete the certificate can also be used for a current degree requirement (i.e., major, minor, or General Education), second certificate, or previously awarded degree program.

### **REQUIRED** - (12 units)

EHS 100	One Health in Action (3)
EHS 439A	Outbreaks and Environmental Microbiology: Then to Now (3)
EHS 420	Environmentally Acquired Infections (3)
HPS 433	Global Health (3)



# BACHELOR OF SCIENCE & MASTER OF PUBLIC HEALTH

## Accelerated BS & MPH in Environmental & Occupational Health

Aminata Kilungo, PhD – Program Director

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 56 units 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, physics and college algebra (calculus is preferred).

A GPA of 3.3 or greater during the first two 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 – EOH**  
**Industrial Hygiene or Environmental**  
**Occupational Health Concentration**  
**Curriculum & Recommended Course Sequencing**

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**Effective for those following the 2021/2022 academic curriculum guide**

<u>Incoming AP Courses Accepted</u> – Composition, Calculus, Language, Biology, Chemistry, Physics			
<b>FIRST YEAR</b>			
<b>Fall Semester - (16 undergraduate units)</b>		<b>Spring Semester - (16 undergraduate units)</b>	
ENGL 101	First semester composition (3)	ENGL 102	Second semester composition (3)
MATH 112 (or higher)	College Algebra (3)	CHEM 152	Chemistry II (4)
CHEM 151	Chemistry I (4)	Tier I Gen. Ed.	Traditions & Cultures (3)
Tier I Gen. Ed.	Individuals & Societies (3)	Tier I Gen. Ed.	Traditions & Cultures (3)
NSC 101	Introduction to Human Nutrition (3)	Tier I Gen. Ed.	Individuals & Societies (3)
<b>SUMMER SESSION FOLLOWING FIRST YEAR - (4 undergraduate units)</b> MCB 181 L and R General Biology (4)			
<b>SECOND YEAR</b>			
<b>Fall Semester - (15 undergraduate units)</b>		<b>Spring Semester - (15 undergraduate units)</b>	
CHEM 241A & 241B	Organic Chemistry (5)	PHYS 102	Introduction to Physics (3)
PSIO 201 or 380	Anatomy and Physiology (4)	EHS 375	Introduction to Environmental & Occupational Health (3)
HPS 178	Personal Health & Wellness (3)	HPS 200	Introduction to Public Health (3)
Tier II Gen. Ed.	Arts or Humanities (3)	EPID 309	Introduction to Epidemiology (3)
		Tier II Gen. Ed.	Individuals & Societies (3)
<b>SUMMER SESSION FOLLOWING SECOND YEAR - (6-8 undergraduate units)</b> <b>Second Semester Language</b> (proof of second semester proficiency is needed) <b>OR General Electives</b> (if second semester language requirement is satisfied) (6-8) <b>Submit application to Public Health Major during the 4th semester or summer term</b>			

THIRD YEAR			
Take GRE during the summer term or 5th semester; apply for admission to the MPH with a 3.3 minimum GPA by January 1 for priority admission or March 1 for secondary admission (final deadline for application deadline is not later than the end of the 6th semester).			
Fall Semester - (12-18 undergraduate units)		Spring Semester - (15 undergraduate units)	
PHPM 310	Health Care in the US (3)	HPS 433	Global Health (3)
HPS 350	Principles of Health Education (3)	HPS 478	Public Health Nutrition (3)
Public Health Electives (6)		ENGL 307 or ENGL 308	Business or Technical Writing (3)
General Elective (check with Advisor about how many units needed) (0-6)		HPS 493A	Field Work in Public Health (internship) (6)
FOURTH YEAR			
Fall Semester - (12 graduate units, counted towards both programs)		Spring Semester - (12 graduate units)	
EPID 573A	Epidemiology (3)	EHS 553	Toxicology & Chemical Exposures (or EHS track approved course) (3)
BIOS 576A	Biostatistics (3)	EHS 655	Control of Occupational Exposures (or EHS track approved course) (3)
EHS 502	Environmental Monitoring Methods (3)	EHS 575	Environmental & Occupational Health (3)
EHS 584	Fundamentals of Industrial Hygiene & Environmental Health (3)	PHPM 574	Public Health Policy and Management (3)
Student graduates with a BS with a major in Public Health (minimum 120 credit hours)		Internship Preparation Training (0)	
Summer Session following Third Year (1 graduate unit)			
EHS 909 Master's Report "Internship" (1)			
FIFTH YEAR			
Fall Semester - (10 graduate units)		Spring Semester - (10 graduate units)	
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)	EHS 653	Applied Exposure Assessment (3)
EHS 522	Introduction to Occupational Safety (or EHS track approved course) (3)	EHS 510	Physical Exposures (or EHS track approved course) (3)
EHS 696R	Environmental & Occupational Health Seminar (1)	EHS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
EHS 909	Master's Report "Internship" (3)	EHS 696R	Environmental & Occupational Health Seminar (1)
		EHS 909	Master's Report "Internship" (2)

**Student Graduates with MPH**  
**Total BS + MPH Credit Hours: 155 (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.

### **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**

- Maternal & Child Health
- Global 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)
- MD/MPH – Clinical Leadership (Based at the Phoenix campus)

## **Master of Public Health (MPH) Degree Concentrations**

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 select one of the nine concentration areas listed below. Dual degree options are also available, including the MPH/MA in Latin American Studies, the DNP/MPH with the College of Nursing, and the MPH/MS in Mexican American Studies, the MD/MPH with the College of Medicine, the JD/MPH with the College of Law, the MBA/MPH with Eller College of Management, and the PharmD/MPH with the College of Pharmacy.

### **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, critical assessment of the literature and study presentations in public health.

## **Family and Child Health**

The Family and Child Health (FCH) area of study focuses on promoting the health and well-being of families through practice and research projects and policy initiatives. Course work emphasizes women, children, and adolescents in the various contexts that influence health including culture, history, political climate, health systems, and socioeconomics. Course offerings include Maternal and Child Health (MCH), MCH epidemiology, adolescent health, family violence, and women and children's policy. Students also immerse themselves in real-world, practical experience through required service-learning courses.

## **Global Health**

The Global Health (GH) area of study will provide students with core public health skills, history of global responses to health problems, and a rich understanding of the social, environmental, political and economic determinants of health in a global setting. GH faculty have a depth of experience in international contexts conducting research, establishing clinics, and implementing community-based health education programs. Course offerings include global health, international nutrition, infectious disease epidemiology, and changing health policy.

## **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 a 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**

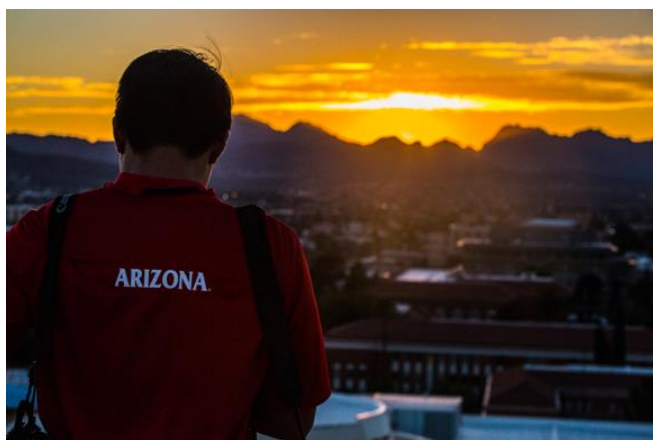
The One Health curriculum model recognizes that multi-disciplinary efforts at the intersection between humans, animals and their respective environments are needed to solve complex diseases and public health concerns. These approaches to understanding disease can be visible at the local level but also 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 program prepares students to fill leadership roles in public health organizations, to manage public health programs, and to advocate for policies that improve the health and well-being of targeted populations. Graduates are expected to understand the financing and delivery of medical services in the United States, manage programs in public health organizations, evaluate the fiscal status of public health, for-profit, and non-profit health care organizations, analyze health-related legislative and regulatory proposals, and to solve public health problems by advocating for evidence-based policy solutions at the local, state, and federal level.

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

The Public Health Practice concentration 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.



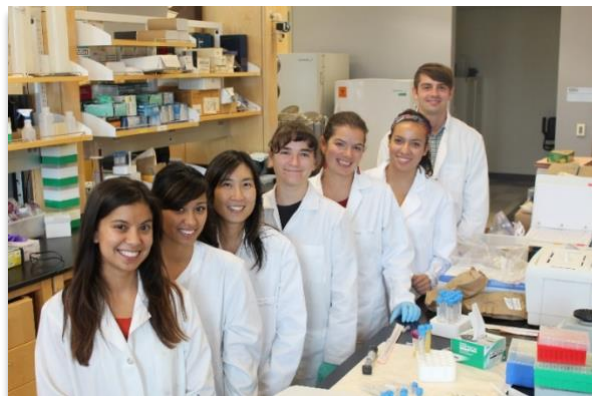


## Master of Public Health Degree Requirements

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 from the 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 at least two interprofessional education (IPE) programs, or events that are available through various MEZCOPH courses, and the Arizona Health Sciences Center's IPE activities. To prepare them for IPE activities, students are **required** to read the following articles prior to participating:

1. Xyrichis A and Lowton K. (2008) What fosters or prevents interprofessional teamworking in primary and community care? A literature review. *International Journal of Nursing Studies* 45:140-153
2. U.S. Department of Health and Human Services. Multiple Chronic Conditions Initiative. Education and Training Curriculum on Multiple Chronic Conditions. Module 4. Interprofessional Collaboration. Washington, DC. June 2015.

Documentation of IPE participation is required for graduation. Detailed information on the requirements for each concentration area follows.



# EPIDEMIOLOGY AND BIostatISTICS

## Master of Public Health in Biostatistics

Edward J. Bedrick, PhD -Program Director

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. The MPH in Biostatistics program level competencies on the [program website](#) define professional skills that students are expected to acquire upon graduating from the program.



## MPH – Biostatistics

### Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

#### **REQUIRED CORE COURSES** - (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
BIOS 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

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:

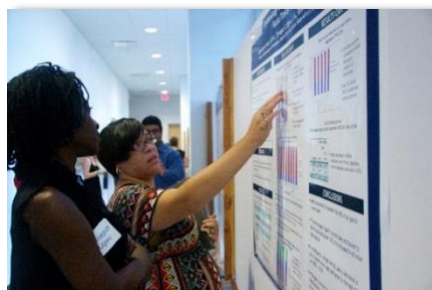
EPID 677	Genetic Association Studies (3)
BIOS 685	Special Topics in Biostatistics (3)
STAT 571A	Advanced Statistical Regression Analysis (3)
STAT 571B	Design of Experiments (3)
STAT 675	Statistical Computing (3)

**Total Required Credit Hours: 42**



**Biostatistics Recommended Course Sequencing**  
**Effective for those following the 2021/2022 academic curriculum guide**

FIRST YEAR			
Fall Semester - (9 units)		Spring Semester - (9 units)	
BIOS 576A*	Biostatistics in Public Health (3)	BIOS 576B	Biostatistics for Research (3)
EPID 573A*	Basic Principles of Epidemiology (3)	PHPM 574*	Public Health Policy & Management (3)
EHS 575*	Environmental & Occupational Health (3)	HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)
		Internship Preparation Workshop (required; non-credit)	
SECOND YEAR			
Fall Semester - (12 units)		Spring Semester - (12 units)	
BIOS 576C <sup>1</sup>	Applied Biostatistics Analysis (3)	BIOS 647 <sup>2</sup>	Analysis of Categorical Data (3)
Elective(s)	(Approved by Faculty Mentor) (6)	BIOS 909 **	Master’s Report “Internship” (5)
BIOS 576D <sup>1</sup>	Data Management and the SAS Programming Language (3)	Elective	(Approved by Faculty Mentor) (3)
		BIOS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student’s final term in the program.			
** Prerequisites for BIOS 909 – Master’s Report “Internship”: 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. Final report cannot be submitted until all five 3-unit core courses have been completed.			
<sup>1</sup> BIOS 576C and BIOS 576D are only offered in the Fall Semester.			
<sup>2</sup> BIOS 647 is only offered in the Spring Semester.			



# EPIDEMIOLOGY AND BIOSTATISTICS

## Master of Public Health in Epidemiology

Kacey Ernst, PhD, MPH – Program Director

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. The MPH in Epidemiology program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program. 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 Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES - (16 units)**

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
EPID 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

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 – <b>2 times</b> )
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)

**Total Required Credit Hours: 42**

## Epidemiology Recommended Course Sequencing

### Effective for those following the 2021/2022 academic curriculum guide

FIRST YEAR			
Fall Semester - (12 units)		Spring Semester - (13 units)	
EPID 573A*	Basic Principles of Epidemiology (3)	EPID 573B <sup>1</sup>	Epidemiologic Methods (3)
BIOS 576A*	Biostatistics in Public Health (3)	BIOS 576B <sup>1</sup>	Biostatistics for Research (3)
PHPM 574*	Public Health Policy & Management (3)	EHS 575*	Environmental & Occupational Health (3)
<u>or</u> EHS 575*	Environmental & Occupational Health (3)	<u>or</u> PHPM 574*	Public Health Policy & Management (3)
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)	EPID 6xx	Selective Epidemiology Course #1: 645, 660 <sup>3</sup> , 670, 676, 677 (3)
		EPID 696A <sup>2</sup>	Epidemiology Seminar (1)
		Internship Preparation Workshop (required; non-credit)	
Summer Session following First Year			
Begin 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) <sup>4</sup>		Spring Semester - (7-11 units) <sup>4</sup>	
EPID 573C <sup>1</sup>	Advanced Epidemiology (3)	EPID 6xx	Selective Epidemiology Course #3: 645, 660 <sup>3</sup> , 670, 676, 677 (3)
EPID 6xx	Selective Epidemiology Course #2: 615 (odd yrs.), 630, 646 (even yrs.) (3)	EPID 6xx	Selective Epidemiology Course (3)
<u>or</u> EPID 596D <sup>2</sup>	Public Health Experience – Student Epidemiology Response Team (2)	<u>or</u> EPID 596D <sup>2</sup>	Public Health Experience – Student Epidemiology Response Team (2)
EPID 696A <sup>2</sup>	Epidemiology Seminar (1)	EPID 696A <sup>2</sup>	Epidemiology Seminar (1)
EPID 909 **	Master’s Report “Internship” (0-2; typically 0)	EPID 909 **	Master’s Report “Internship” (1-3; often 3)
		EPID 580	Integrated Public Health Learning Experience - MPH capstone course(1)
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student’s final term in the program.			
** Prerequisites for EPID 909 – Master’s Report “Internship”: At least 3 MPH core courses, EPID 573B, and BIOS 576B before starting internship. EPID 909 typically is taken in multiple semesters with the credit hours split across semesters. Note: The final internship report may not be completed until the semester following the completion of all five MPH core courses.			
<sup>1</sup> This course only offered in this specific semester; <b>not</b> in both fall and spring semesters.			
<sup>2</sup> This course is offered both fall and spring semesters			
<sup>3</sup> 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.			
<sup>4</sup> Students who require full time graduate status for loan/scholarship disbursement may need to take more units than the sequencing recommends.			



## Master of Public Health in One Health

Kristen Pogreba Brown, PhD, MPH – Faculty Lead

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. The MPH in One Health program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduation from the program.



## MPH – One Health Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES - (16 units)**

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

### **REQUIRED ONE HEALTH COURSES - (17 units)**

- EPID/EHS 545    One Health Foundations (3)
- EHS 660        Infectious Disease Epidemiology (3)
- EHS 525        Global to Local: Environmental Change and Human 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 - (9 units)**

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

**Total Required Credit Hours: 42**

**One Health Recommended Course Sequencing**  
Effective for those following the 2021/2022 academic curriculum guide

FIRST YEAR			
Fall Semester - (12 units)		Spring Semester - (11 units)	
EPID 573A*	Basic Principles of Epidemiology (3)	EHS 525 <sup>2</sup>	Global to Local: Environmental Change and Human Health (3)
BIOS 576A*	Biostatistics in Public Health (3)	or EPID 660 <sup>2,3</sup>	Infectious Disease Epidemiology (3)
EHS/EPID 545 <sup>2</sup>	One Health Foundations (3)	EPID 596D <sup>1</sup>	Public Health Experience – Student Epidemiology Response Team (SAFER) (2)
PHPM 574*	Public Health Policy & Management (3)	EHS 575*	Environmental and Occupational Health (3)
		HPS 577*	Public Health Policy & Management (3)
		Internship Preparation Workshop (required; non-credit)	
Summer Session following First Year			
Begin EPID 909 Master’s Report “Internship” (1-2; typically 1) **			
(To conduct the internship, you must be enrolled.)			
One Health Selective - Human, Animal, or Environmental (3) – optional			
SECOND YEAR			
Fall Semester - (10-12 units)		Spring Semester - (9-12 units)	
EPID 679 <sup>2</sup>	One Health Applications and Practice (3)	EHS 525 <sup>2</sup>	Global to Local: Environmental Change and Human Health (3)
One Health Selective	Human, Animal, or Environmental (3)	or EPID 660 <sup>2</sup>	Infectious Disease Epidemiology (3)
One Health Selective	Human, Animal, or Environmental (3)	One Health Selective(s)	Human, Animal, or Environmental (3)
EPID 909**	Master’s Report “Internship” (0-2, typically 0)	EPID 909 **	Master’s Report “Internship” (1-3, often 3)
EPID 580	Integrated Public Health Learning Experience - MPH capstone course(1)		
(or EPID 580 can be taken in the Spring of the 2 <sup>nd</sup> year)			
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student’s final term in the program when writing your Internship Report.			
** Prerequisites for EPID 909 – Master’s Report “Internship”: At least 3 MPH core courses and EPID 596D before starting internship. EPID 909 typically is taken in multiple semesters with the credit hours split across semesters. Note: The final internship report may not be completed until the semester following the completion of all five MPH core courses			
<sup>1</sup> This course is offered both fall and spring semesters			
<sup>2</sup> This course only offered in this specific semester; not in both fall and spring semesters.			
<sup>3</sup> Students planning an infectious disease related MPH Internship are encouraged to take EPID 660 spring year 1. Note: EPID 660 and HPS 577 are offered during the same time slot in spring, so plan accordingly.			



**One Health Required Selectives**  
**Effective for those following the 2021/2022 academic curriculum guide**

Students must take <b><i>at least one</i></b> course from <b><i>each</i></b> of the three areas (Human, Animal, Environment)		
Course	Semester Typically Offered*	Units
<b><u>HUMAN</u></b>		
HPS 533 Global Health	Spring	3
EPID 606 Changing Health Policy: Cultural Understanding & Epi Analysis	Spring	4
EHS 551 Systems Thinking in One Health	Spring	3
HPS 534 Infectious Diseases, Global Health and Development	Spring (online)	3
AREC/ECON 516 Microeconomics of Economic Development	Fall	3
EHS 546 One Health Approach and Cases Studies	Fall	3
<b><u>ANIMAL / PATHOGEN</u></b>		
EHS 539A Outbreaks and Environmental Microbiology: Then to Now	Summer	3
MIC 530 Food Microbiology and Biotechnology	Spring	3
IMB 520 Pathogenic Bacteriology	Fall	3
ACBS 549 Diseases of Wildlife	Fall	3
ACBS 505 Principles of Livestock Health Management	Spring	3
ECOL 557 Medical Veterinary Entomology	Spring	3
ACBS 519 General Immunological Concepts	Fall	4
<b><u>ENVIRONMENT</u></b>		
RNR 558 Ecosystem Ecology and a Sustainable Future ( <i>highly recommended</i> )	Spring	3
RNR 540 Climate Change Adaptation: Perspectives at the Nexus of Science, Society and Resource Management	Fall / Spring	3
RNR 580 Natural Resources Policy and Law	Spring	3

RNR 582 Managing to Collaborate on Environmental and Natural Resources Conflicts	Spring	3
EHS 520 Environmentally Acquired Illnesses	Spring	3
<b>NOTES:</b> * Consult the UA schedule of classes and catalog for further details on the current course offering schedule and specific course requirements.		



## Master of Public Health in Environmental and Occupational Health

Aminata Kilungo, PhD -Program Director

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 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 are required to do an internship. 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 inorganic chemistry, one semester of organic chemistry and one semester of physics, in addition to the general MPH admission requirements. The MPH in Environmental and Occupational Health (EOH) program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.

## MPH – Environmental and Occupational Health (IH Track) Curriculum & Recommended Course Sequencing

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### MPH – Industrial Hygiene Track Effective for those following the 2021/2022 academic curriculum guide

#### REQUIRED CORE COURSES - (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
EHS 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities

(**documentation required**; non-credit)

#### REQUIRED EOH COURSES - (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 – <b>2 times</b> )
EHS 909	Master's Report "Internship" (6)

#### REQUIRED COURSES FOR INDUSTRIAL HYGIENE (IH) TRACK - (12 units)

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

**Total Required Credit Hours: 45**

**EOH (IH Track) Recommended Course Sequencing**  
**(odd year program entry)**  
**Effective for those following the 2021/2022 academic curriculum guide**

FIRST YEAR			
Fall Semester - (13 units)		Spring Semester - (12 units)	
EHS 502	Environmental Monitoring & Analysis (3)	EHS 553 <sup>1</sup>	Toxicology and Chemical Exposure (3)
EPID 573A*	Basic Principles of Epidemiology (3)	PHPM 574*	Public Health Policy and Management (3)
BIOS 576A*	Biostatistics in Public Health (3)	EHS 653	Applied Exposure Assessment (3)
EHS 584	Fundamentals of Industrial & Environmental Health (3)	EHS 655 <sup>1</sup>	Control of Occupational Exposures (3)
EHS 696R	Environmental & Occupational Health Seminar (1)	EHS 696R	Environmental & Occupational Health Seminar (0)
		Internship Preparation Workshop (required; non-credit)	
Summer Session following First Year			
Begin EHS 909 Master's Report "Internship" (1)**			
SECOND YEAR			
Fall Semester - (7-11 units)		Spring Semester - (8-12 units)	
EHS 575*	Environmental & Occupational Health (3)	EHS 510 <sup>2</sup>	Physical Exposures and Ergonomics (3)
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)	EHS 522 <sup>3</sup>	Introduction to Occupational Safety (3)
EHS 696R	Environmental & Occupational Health Seminar (1)	EHS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
EHS 909**	Master's Report "Internship" (0-4)	EHS 696R	Environmental & Occupational Health Seminar (0)
		EHS 909**	Master's Report "Internship" (1-5)
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.			
** Prerequisites for EHS 909 – Master's Report "Internship": May not be initiated until a minimum of 3 core classes have been completed (which must include BIOS 576A), 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.			
<sup>1</sup> Course only offered in the Spring of even years			
<sup>2</sup> Course only offered in the Spring of odd years			
<sup>3</sup> Course only offered in the Spring semester (both even and odd years)			

## MPH – Environmental and Occupational Health (EOH Track) Curriculum & Recommended Course Sequencing

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### MPH – Environmental and Occupational Health Track Effective for those following the 2021/2022 academic curriculum guide

#### REQUIRED CORE COURSES - (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
EHS 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities

(**documentation required**; non-credit)

#### REQUIRED EOH COURSES - (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 – <b>2 times</b> )
EHS 909	Master's Report "Internship" (6)

#### ELECTIVE COURSES FOR 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	Introduction to Occupational Safety (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)

**Total Required Credit Hours: 42**

**EOH (EOH Track) Recommended Course Sequencing**  
**(odd year program entry)**  
**Effective for those following the 2021/2022 academic curriculum guide**

FIRST YEAR			
Fall Semester - (13 units)		Spring Semester - (9 units)	
EHS 502	Environmental Monitoring & Analysis (3)	PHPM 574*	Public Health Policy and Management (3)
EPID 573A*	Basic Principles of Epidemiology (3)	EHS 575*	Environmental & Occupational Health (3)
BIOS 576A*	Biostatistics in Public Health (3)	EHS 653	Applied Exposure Assessment (3)
EHS 584	Fundamentals of Industrial & Environmental Health (3)	EHS 696R	Environmental & Occupational Health Seminar (0)
EHS 696R	Environmental & Occupational Health Seminar (1)	Internship Preparation Workshop (required; non-credit)	
Summer Session following First Year			
Begin EHS 909 Master's Report "Internship" (1) **			
SECOND YEAR			
Fall Semester - (7-11 units)		Spring Semester - (8-12 units)	
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)	EHS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
EHS 696R	Environmental & Occupational Health Seminar (1)	EHS 696R	Environmental & Occupational Health Seminar (0)
EHS 909**	Master's Report "Internship" (0-4)	Elective(s) <sup>1</sup>	(Approved by Faculty Mentor) (6)
Elective <sup>1</sup>	(Approved by Faculty Mentor) (3)	EHS 909**	Master's Report "Internship" (1-5)
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.			
** Prerequisites for EHS 909 – Master's Report "Internship": May not be initiated until a minimum of 3 core classes have been completed (which must include BIOS 576A), 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.			
<sup>1</sup> Contact your Faculty Mentor for a list of Elective courses appropriate to your interest area.			





## Master of Public Health in Public Health Policy and Management

Joe Gerald, MD, PhD -Program Director

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.

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The MPH in Public Health Policy and Management (PHPM) program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program. 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 – Public Health Policy & Management Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES** *(16 units)*

- EPID 573A    Basic Principles of Epidemiology (3)
- PHPM 574    Public Health Policy & Management (3)
- EHS 575     Environmental & Occupational Health (3)
- BIOS 576A   Biostatistics in Public Health (3)
- HPS 577     Sociocultural & Behavioral Aspects of Public Health (3)
- PHPM 580    Integrated Public Health Learning Experience - **MPH capstone course** (1)
- Internship Preparation Workshop  
(**required**; non-credit; semester before internship begins)
- Interprofessional Education Activities  
(**documentation required**; 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 & 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)
- 597            Service Learning Course (1)  
(various options offered by the College of Public Health)

### **ELECTIVE COURSES -** *(8 units, approved by Faculty Mentor)*

**Total Required Credit Hours: 42**

**PHPM Recommended Course Sequencing**  
**Effective for those following the 2021/2022 academic curriculum guide**

FIRST YEAR			
Fall Semester - (12 units)		Spring Semester - (10 units)	
PHPM 510	The US Health Care System (3)	PHPM 567	Public Health Leadership & Management (3)
EPID 573A*	Basic Principles of Epidemiology (3)	BIOS 576A*	Biostatistics in Public Health (3)
PHPM 574*	Public Health Policy & Management (3)	Elective	(Approved by Faculty Mentor) (3)
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)	597 Service Learning Course (1) #	
		Internship Preparation Workshop (required; non-credit)	
SECOND YEAR			
Fall Semester - (11 units)		Spring Semester - (9 units)	
PHPM 569	Fundamentals of Health Budgeting & Financial Management (3)	PHPM 617	Advanced Public Health Policy Analysis (3)
EHS 575*	Environmental & Occupational Health (3)	PHPM 696P	Public Health Policy and Management Field Seminar (2)
PHPM 909**	Master’s Report “Internship” (3)	PHPM 580	Integrated Public Health Learning Experience - MPH capstone course (1)
Elective	(Approved by Faculty Mentor) (2)	Elective	(Approved by Faculty Mentor) (3)
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student’s final term in the program.			
** Prerequisites for PHPM 909 – Master’s Report “Internship”: Minimum 3 MPH core courses required before starting internship. 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.			
# 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.			

**# Service Learning Course:**

**Choose from the following:**

EPID 597S	Skin Cancer Prevention in the Community Setting (1-2) – (offered Fall and Spring)
HPS 597A	Maternal & Child Health Programs in Urban Settings (1)
HPS 597B	Maternal & Child Health Programs in the Rural Southwest (1)
HPS 597E	Public Health for Community Wellness (2) – (offered Fall and Spring)
PHP 597C	Border Health Service Learning Institute (1)
PHP 597F	Phoenix Urban Service Learning (1)
PHPM 597D	Rural Health Service Learning Institute (1)

## Master of Public Health in Health Behavior Health Promotion

Nicole Yuan, PhD, MPH – Program Director

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. The MPH in Health Behavior Health Promotion program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.

**MPH – Health Behavior Health Promotion  
Main Campus Curriculum & Recommended Course Sequencing**

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**Effective for those following the 2021/2022 academic curriculum guide**

**REQUIRED CORE COURSES - (16 units)**

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

**REQUIRED HBHP COURSES - (15 units)**

- HPS 531     Contemporary Health Issues and Research (3)
- HPS 535     Multicultural Health Beliefs (3)
- HPS 532A    Applied Aspects of Program Planning, Implementation,  
and Evaluation I (4)
- HPS 909     Master's Report "Internship" (5)

**ELECTIVE COURSES** (*minimum 11 units, approved by Faculty Mentor*)

Service Learning courses (597 A-G & S) are strongly recommended to meet 1-2 elective credit options.

**Total Required Credit Hours: 42**



## HBHP Recommended Course Sequencing

### Effective for those following the 2021/2022 academic curriculum guide

FIRST YEAR			
Fall Semester - (13 units)		Spring Semester - (10 units)	
HPS 531 <sup>1</sup>	Contemporary Health Issues & Research (3)	HPS 532A <sup>1,2</sup>	Applied Aspects of Program Planning, Implementation & Evaluation I (4)
EPID 573A *	Basic Principles of Epidemiology (3)	PHPM 574 *	Public Health Policy and Management (3)
BIOS 576A *	Biostatistics in Public Health (3)	Elective	(Approved by Faculty Mentor) (3)
HPS 577 *	Sociocultural & Behavioral Aspects of Public Health (3)	Internship Preparation Workshop (required; non-credit)	
597 Service Learning Course (1) # (recommended)		597 Service Learning Course (1) # (recommended if elective units remain unfulfilled)	
Service Learning 597 course (1) # (offered all semesters including winter & summer)			
SECOND YEAR			
Fall Semester - (11 units)		Spring Semester - (8 units) <sup>3</sup>	
HPS 535 <sup>1,2</sup>	Multicultural Health Beliefs (3)	HPS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
EHS 575 *	Environmental & Occupational Health (3)	HPS 909 **	Master's Report "Internship" (4)
HPS 909 **	Master's Report "Internship" (1)	Elective	(Approved by Faculty Mentor) (3)
Elective	(Approved by Faculty Mentor) (3)	597 Service Learning Course (1) # (recommended if elective units remain unfulfilled)	
597 Service Learning Course (1) # (recommended)			
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.			
** Prerequisites for HPS 909 – Master's Report "Internship" - HBHP Track: At least 3 MPH core courses and HPS 532A. Final report cannot be submitted until all five 3-unit core courses have been completed.			
<sup>1</sup> This course only offered in this specific semester			
<sup>2</sup> Prerequisites for – HPS 532A: HPS 531 and HPS 577   HPS 535: HPS 577			
<sup>3</sup> 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) are strongly recommended to meet 1-2 elective credit options, suggestions include 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.			

#### # Service Learning Course:

Choose from the following:

EPID 597S	Skin Cancer Prevention in the Community Setting (1-2) – (offered Fall and Spring)
HPS 597A	Maternal & Child Health Programs in Urban Settings (1)
HPS 597B	Maternal & Child Health Programs in the Rural Southwest (1)
HPS 597E	Public Health for Community Wellness (2) – (offered Fall and Spring)
PHP 597C	Border Health Service Learning Institute (1)
PHP 597F	Phoenix Urban Service Learning (1)
PHPM 597D	Rural Health Service Learning Institute (1)



## Master of Public Health in Family and Child Health

Purnima Madhivanan, MBBS, MPH, PhD – Program Director

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 in the United States and globally. Course work in the Maternal and Child Health (MCH) specialized area has a greater emphasis on domestic MCH mortality and morbidity, interventions and policy. Each student, under the guidance of a faculty mentor, will develop an individualized plan of study for their specialized area of interest. The MPH in Family and Child Health program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.

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 and Child Health Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES - (16 units)**

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

### **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)
  - 597    Service Learning Courses (2)  
(various options offered by the College of Public Health)
  - 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 Program Planning/Evaluation course (consult with Faculty Mentor for options) (3)
  - HPS 909    Master's Report "Internship" (4)
- ELECTIVE COURSES - (minimum 7 units required, approved by Faculty Mentor) (7)**

**Total Required Credit Hours: 42**

**MPH FCH Recommended Course Sequencing**  
**Effective for those following the 2021/2022 academic curriculum guide**

FIRST YEAR			
Fall Semester - (13 units)		Spring Semester - (9 units)	
EPID 573A*	Basic Principles of Epidemiology (3)	HPS 588	Adolescent Health (3)
HPS 577*	Sociocultural & Behavioral Aspects of Public Health (3)	or HPS 512	Public Health Approach to Mental Health Disorders in the U.S. (3)
HPS 586	Maternal & Child Health (3)	EHS 575*	Environmental & Occupational Health (3)
BIOS 576A*	Biostatistics in Public Health (3)	Program Planning/Evaluation Course (approved by Faculty Mentor) (3)	
HPS 696H	Maternal & Child Health/Public Health Seminar (1)		
Service Learning 597 courses (2) # (offered all semesters including winter & summer)			
SECOND YEAR			
Fall Semester - (12 units)		Spring Semester - (6 units) <sup>1</sup>	
EPID 630	MCH Epidemiology (3)	HPS 909**	Master's Report "Internship" (4)
PHPM 574*	PH Policy & Management (3)	HPS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
Electives	(Approved by Faculty Mentor) (6)	Elective	(Approved by Faculty Mentor) (1)
Internship Preparation Workshop (required; non-credit)			
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.			
**Prerequisites for HPS 909 – Master's Report "Internship": At least 3 MPH core courses; HPS 586 - Maternal and Child Health; and (1) Program Planning & Evaluation Course. Final report cannot be submitted until all five 3-unit core courses have been completed.			
<sup>1</sup> 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.			

**# Service Learning Course:**

**Choose from the following:**

EPID 597S	Skin Cancer Prevention in the Community Setting (1-2) – (offered Fall and Spring)
HPS 597A	Maternal & Child Health Programs in Urban Settings (1)
HPS 597B	Maternal & Child Health Programs in the Rural Southwest (1)
HPS 597E	Public Health for Community Wellness (2) – (offered Fall and Spring)
PHP 597C	Border Health Service Learning Institute (1)
PHP 597F	Phoenix Urban Service Learning (1)
PHPM 597D	Rural Health Service Learning Institute (1)

## Master of Public Health in Global Health

Purnima Madhivanan, MBBS, MPH, PhD – Program Director

The MPH degree in Global Health is offered by the [Department of Health Promotion Sciences](#). The Global Health (GH) concentration provides students a curriculum that addresses the history and current status of the socioeconomic, cultural, political and physiological issues that affect the health in a global setting. Course work in Global Health emphasizes core public health skills, qualitative and quantitative research methods, proposal development, monitoring and evaluation, history of global response to health issues, and an in-depth understanding of sociopolitical, economic, and environmental determinants of health. Each student, under the guidance of a faculty mentor, will develop an individualized plan of study for their specialized area of interest. The MPH in Global Health program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.

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 GH concentration include work or volunteer experience with underserved populations. The GH concentration encourages people with a variety of professional and academic backgrounds to apply. Our graduates include nurses, nutritionists, social workers, teachers and physicians



## MPH – Global Health Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES - (16 units)**

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

### **REQUIRED GLOBAL HEALTH COURSES - (26 units)**

- HPS 533     Global Health (3)
- HPS 560     International Nutrition (3)
- EHS 525     Global to Local: Environmental Change and Human Health (3)
- HPS 529     Project Planning and Evaluation in Global Health and Development (3)
- HPS 635     Applied Field Methods in Global Health Nutrition (3)  
**or** HPS 559 Management of Global Public Health Emergencies (3)
- EPID 606     Changing Health Policy: Cultural Understanding & Epi Analysis (4)
- HPS 909     Master's Report "Internship" (4)

**ELECTIVE COURSES - (minimum 3 units required, approved by Faculty Mentor) (3)**

**Total Required Credit Hours: 42**



**MPH Global Health Recommended Course Sequencing**  
**Effective for those following the 2021/2022 academic curriculum guide**

FIRST YEAR			
Fall Semester - (12 units)		Spring Semester - (13 units)	
EPID 573A*	Basic Principles of Epidemiology (3)	HPS 533 <sup>2</sup>	Global Health (3)
BIOS 576A*	Biostatistics in Public Health (3)	HPS 560 <sup>2</sup>	International Nutrition (3)
HPS 577*	Sociocultural Aspects of Public Health (3)	PHPM 574*	Public Health Policy and Management (3)
HPS 529 <sup>3</sup>	Project Planning and Evaluation in Global Health and Development (3)	EPID 606 <sup>1,2</sup>	Changing Health Policy: Cultural Understanding & Epi Analysis (4)
		Internship Preparation Workshop (required; non-credit)	
SECOND YEAR			
Fall Semester - (9 units)		Spring Semester - (8 units) <sup>4</sup>	
EHS 575*	Environmental and Occupational Health (3)	EHS 525 <sup>2</sup>	Global to Local: Environmental Change and Human Health (3)
HPS 635 <sup>3</sup>	Applied Field Methods in Global Health Nutrition (3)	HPS 909**	Master’s Report “Internship” (4)
<u>or</u> HPS 559 <sup>3</sup>	Management of Global Public Health Emergencies (3)	HPS 580	Integrated Public Health Learning Experience - MPH capstone course (1)
Elective	(Approved by Faculty Mentor) (3)		

<b>IMPORTANT GUIDELINES</b>
<b>Bolded courses in first fall semester indicate essential courses for the student to take that semester.</b>
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.
<b>**Prerequisites for HPS 909 – Master's Report "Internship":</b> At least three MPH core courses; HPS 533 - Global Health; and HPS 529 – Project Planning and Evaluation in Global Health and Development. Final report cannot be submitted until all five 3-unit core courses have been completed.
<sup>1</sup> Prerequisites for EPID 606: EPID 573A. Concurrent registration, PHPM 574 and HPS 577.
<sup>2</sup> HPS 533, HPS 560, EPID 606, EHS 525 are offered in the spring semester only.
<sup>3</sup> HPS 529, HPS 559 and HPS 635 are offered in the fall semester only.
<sup>4</sup> Students who require full time graduate status for loan/scholarship disbursement may need to take more units than the sequencing recommends.



## Master of Public Health in Health Services Administration

Amanda Sokan, PhD, MHA, LL.B – Program Director

Terry Urbine, PhD - Program Director

*(Phoenix and Tucson Campuses)*

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 program is geared toward students who are excited to enroll in courses that utilize a combination of online and classroom style teaching modalities. The Health Services Administration curriculum is comprised of specifically targeted courses, with a goal to graduate highly qualified health care administrators. The MPH in Health Services Administration program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.



## MPH – Health Services Administration Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES - (16 units)**

- EPID 573A    Basic Principles of Epidemiology (3)
- PHPM 574    Public Health Policy & Management (3)
- EHS 575     Environmental & 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 - **MPH capstone course** (1)
- Internship Preparation Workshop  
(**required**; non-credit; semester before internship begins)
- Interprofessional Education Activities  
(**documentation required**; non-credit)

### **REQUIRED HSA COURSES - (26 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 & Financial Management (3)
- PHPM 608A   Public Health Law and Ethics (3)
- PHP 641     Health Systems Delivery (3)
- PHP 909     Master's Report "Internship" (5)

**Total Required Credit Hours: 42**

**HSA Recommended Course Sequencing**  
**Effective for those following the 2021/2022 academic curriculum guide**  
**(Phoenix-based option)**

FIRST YEAR			
Fall Semester - (12 units)		Spring Semester - (12 units)	
PHPM 558	Health Care Marketing (3)	BIOS 576A <sup>*,2</sup>	Biostatistics for Public Health (3)
PHPM 562 <sup>1</sup>	Health Services Administration (3)	PHP 641 <sup>1,3</sup>	Health Systems Delivery (3)
PHPM 569 <sup>1</sup>	Fundamentals of Health Budgeting & Financial Management (3)	PHPM 561 <sup>1</sup>	Introduction to Health Care Quality and Safety (3)
EPID 573A *	Basic Principles of Epidemiology (3)	PHPM 574 <sup>*,2</sup>	Public Health Policy & Management (3)
Internship Preparation Workshop (required; non-credit)			
SECOND YEAR			
Fall Semester - (9 units)		Spring Semester - (9 units)	
EHS 575 <sup>*,2</sup>	Environmental & Occupational Health (3)	PHPM 507	Health Care Economics and Policy (3)
HPS 577 <sup>*,2</sup>	Sociocultural & Behavioral Aspects of Public Health (3)	PHP 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)
PHP 909 **	Master's Report "Internship" (3)	PHPM 608A <sup>1</sup>	Public Health Law and Ethics (3)
		PHP 909 **	Master's Report "Internship" (2)
IMPORTANT GUIDELINES			
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.			
** Prerequisites for PHP 909 – Master's Report "Internship": At least 3 MPH core courses (which must include BIOS 576A or EPID 573A).			
<sup>1</sup> This course is only offered in this specific semester (e.g. Fall or Spring).			
<sup>2</sup> Online option of this course only available in this specific semester (e.g. Fall or Spring). Course not available in person in Phoenix.			
<sup>3</sup> 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.			



**HSA Recommended Course Sequencing**  
**Effective for those following the 2021/2022 academic curriculum guide**  
**(Tucson-based option)**

FIRST YEAR			
Fall Semester - (12 units)		Spring Semester - (12 units)	
PHPM 569 <sup>1</sup>	Fundamentals of Health Budgeting & Financial Management (3)	BIOS 576A <sup>*,2</sup>	Biostatistics for Public Health (3)
EPID 573A *	Basic Principles of Epidemiology (3)	PHPM 561 <sup>1</sup>	Introduction to Health Care Quality & Safety (3)
PHPM 558	Health Care Marketing (3)	PHP 641 <sup>1,3</sup>	Health Systems Delivery (3)
PHPM 562 <sup>1</sup>	Health Services Administration (3)	PHPM 574 <sup>2,3</sup>	Public Health Policy & Management (3)
Internship Preparation Workshop (required; non-credit)			
SECOND YEAR			
Fall Semester - (9 units)		Spring Semester - (9 units)	
EHS 575 <sup>*,2</sup>	Environmental & Occupational Health (3)	PHPM 507	Health Care Economics & Policy (3)
HPS 577 <sup>*,2</sup>	Sociocultural & Behavioral Aspects of Public Health (3)	PHP 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)
PHP 909 **	Master's Report "Internship" (3)	PHPM 608A <sup>1</sup>	Public Health Law & Ethics (3)
		PHP 909 **	Master's Report "Internship" (2)
IMPORTANT GUIDELINES			
<b>Bolded courses in first fall semester indicate essential courses for the student to take that semester.</b>			
* 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 3-unit Core Courses must be complete prior to the student's final term in the program.			
** <b>Prerequisites for PHP 909 – Master's Report "Internship":</b> At least 3 MPH core courses (which must include BIOS 576A or EPID 573A).			
<sup>1</sup> This course is only offered in this specific semester (e.g. Fall or Spring).			
<sup>2</sup> Online option of this course only available in this specific semester (e.g. Fall or Spring).			
<sup>3</sup> 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.			
<b>Tucson students:</b> 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.			

## Master of Public Health in Public Health Practice

Amanda Sokan, PhD, MHA, LL.B – Program Director

Terry Urbine, PhD – Program Director

*(Based at the Phoenix Campus)*

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.

The MPH in Public Health Practice program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.



## MPH – Public Health Practice Curriculum & Recommended Course Sequencing

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED CORE COURSES - (16 units)**

- EPID 573A    Basic Principles of Epidemiology (3)
- PHPM 574    Public Health Policy & Management (3)
- EHS 575     Environmental & 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 - **MPH capstone course** (1)
- Internship Preparation Workshop  
(**required**; non-credit; semester before internship begins)
- Interprofessional Education Activities  
(**documentation required**; non-credit)

### **REQUIRED PHP COURSES - (20 units)**

- PHPM 569    Fundamentals of Health Budgeting & Financial Management (3)
- PHPM 564    Science of Health Disparities (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 (1)  
(various options offered by the College of Public Health)
- PHP 909     Master's Report "Internship" (5)

**ELECTIVES** (*minimum 6 units, approved by Faculty Mentor*)

**Total Required Credit Hours: 42**



## PHP Recommended Course Sequencing

### Effective for those following the 2021/2022 academic curriculum guide

FIRST YEAR			
Fall Semester - (11 units)		Spring Semester - (9 units)	
PHPM 569 <sup>1</sup>	Fundamentals of Health Budgeting & Financial Management (3)	PHPM 574 <sup>*,2</sup>	Public Health Policy & Management (3)
EPID 573A *	Basic Principles of Epidemiology (3)	BIOS 576A <sup>*,2</sup>	Biostatistics in Public Health (3)
HPS 529 <sup>1</sup>	Project Design & Implementation (3)	PHP 641 <sup>1,3</sup>	Health Systems Delivery (3)
PHP 696V <sup>1</sup>	Public Health Practice Seminar (2)		
Internship Preparation Workshop (required; non-credit)			
Service Learning 597 course (1) # * (offered all semesters including winter & summer)			
SECOND YEAR			
Fall Semester - (12 units)		Spring Semester - (9 units)	
HPS 577 <sup>*,2</sup>	Sociocultural & Behavioral Aspects of Public Health (3)	PHP 564 <sup>1</sup>	Science of Health Disparities
EHS 575 <sup>*,2</sup>	Environmental and Occupational Health (3)	Elective	(Approved by Faculty Mentor) (3)
Elective	(Approved by Faculty Mentor) (3)	PHP 909 **	Master’s Report “Internship” (2)
PHP 909 **	Master’s Report “Internship” (3)	PHP 580	Integrated Public Health Learning Experience - MPH capstone course (1)
IMPORTANT GUIDELINES			
Bolded courses in first fall semester indicate essential courses for the student to take that semester.			
* 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 3-unit Core Courses must be complete prior to the student’s final term in the program.			
** Prerequisites for PHP 909 – Master’s Report “Internship”: At least 3 MPH core courses (which must include BIOS 576A or EPID 573A).			
<sup>1</sup> This course is only offered in this specific semester (e.g. Fall or Spring).			
<sup>2</sup> Online option of this course only available in this specific semester (e.g. Fall or Spring). Course not available in person in Phoenix.			
<sup>3</sup> 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.			
# 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.			

#### **# Service Learning Course:**

#### **Choose from the following:**

HPS 597A	Maternal & Child Health Programs in Urban Settings (1)
HPS 597B	Maternal & Child Health Programs in the Rural Southwest (1)
PHP 597C	Border Health Service Learning Institute (1)
PHP 597F	Phoenix Urban Service Learning (1)
PHPM 597D	Rural Health Service Learning Institute (1)

# ONLINE MASTER OF PUBLIC HEALTH

## Online Master of Public Health

Christina Cutshaw, PhD – Director, Online Programs

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 Behavior Health Promotion. Each of the online MPH concentrations' program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduation.



## MPH – Applied Epidemiology (Online) Curriculum

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### Effective for those following the 2021/2022 academic curriculum guide

This concentration provides a background for individuals interested in the causes and prevention of human disease. The 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 for students whose careers will focus on conducting investigator-initiated and collaborative epidemiologic research.

#### **REQUIRED CORE COURSES - (19 units)**

PHPM 569	Fundamentals of Health Budgeting & Financial Management (3)
EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
EPID 580	Public Health Integrated Learning Experience - <b>MPH capstone course</b> (1)
Internship Preparation Workshop ( <b>required</b> ; non-credit; semester before internship begins)	
Interprofessional Education Activities ( <b>documentation required</b> ; non-credit)	

#### **REQUIRED APPLIED EPIDEMIOLOGY COURSES - (23 units)**

EPID 555	Introduction to Maternal & 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)
HPS 628	Public Health Research & Evaluation (3)
EPID 909	Master's Report "Internship" (5)

**Total Required Credit Hours: 42**

## MPH – Health Services Administration (Online) Curriculum

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### Effective for those following the 2021/2022 academic curriculum guide

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.

#### REQUIRED CORE COURSES - (19 units)

PHPM 569	Fundamentals of Health Budgeting & Financial Management (3)
EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
PHP 580	Public Health Integrated Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop  
(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities  
(**documentation required**; non-credit)

#### REQUIRED COURSES - (23 units)

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

**Total Required Credit Hours: 42**

## MPH – Health Behavior Health Promotion (Online) Curriculum

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### Effective for those following the 2021/2022 academic curriculum guide

This concentration 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. The 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.

#### REQUIRED CORE COURSES - (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
HPS 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop  
(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities  
(**documentation required**; non-credit)

#### REQUIRED COURSES - (26 units)

HPS 531	Contemporary Health Issues & Research (3)
HPS 532P	Planning of Public Health Programs (3)
HPS 532E	Evaluation of Public Health Programs (3)
HPS 535	Multicultural Health Benefits (3)
PHPM 569	Fundamentals of Health Budgeting & Financial Management (3)
HPS 628	Public Health Research & Evaluation (3)
HPS 642	Public Health Communications (3)
HPS 909	Master's Report "Internship" (5)

**Total Required Credit Hours: 42**

## Medicine MD/MPH

*(Phoenix and Tucson Campuses)*

Phoenix Lead Faculty:

**Doug Campos-Outcalt, MD, MPA**

**Marvin Moe Bell, MD, MPH**

There are two MD/MPH dual degree programs; one at the College of Medicine in Tucson and the other at the College of medicine in Phoenix. The programs are designed to train future leaders in Public Health and clinical medicine and to prepare future clinicians for community-engaged, evidence-based, and socially-responsible medical practice. These goals are achieved in an interprofessional setting that emphasizes respect for people of all ages, genders, ethnicities, cultures, and national origins. Students' pursuit of knowledge and preparation for leadership will be guided by academic and clinical mentors who foster inquisitiveness, open-mindedness, compassion, and resilience. The dual degree programs provide medical students with additional training in all the core public health competencies. The curricula are intended to enhance the graduate's ability to provide high quality medical care by using public health knowledge and skills to plan, implement, and evaluate policies that affect the health of communities. These skills complement the pathophysiologic, diagnostic, and therapeutic training needed to treat individual patients, provided by the College of Medicine





## **MD/MPH – Tucson Campus**

### **Dual Degree with Public Health Policy and Management**

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#### **Effective for those following the 2021/2022 academic curriculum guide**

The MD/MPH in Public Health Policy and Management curriculum comprises 42 units of coursework and experiential learning that leads to a Master's of Public Health (MPH) degree in Public Health Policy and Management (PHPM). All students must complete 16 units of public health courses, 12 units of required PHPM courses, 6 units of applied practice experience, including the internship, and 8 units of elective credit. With approval of the Program Director, students may use up to 8 units of College of Medicine coursework to fulfill the elective requirements. The MPH requirements are summarized below:

#### **REQUIRED CORE COURSES - (16 units)**

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
PHPM 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

**(required;** non-credit)

Interprofessional Education Activities

**(documentation required;** 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 & 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) ‡
597	Service Learning Course (1)

#### **ELECTIVE COURSES - (8 units, approved by Faculty Mentor)**

### **Total Required Credit Hours: 42**

to complete the MPH degree in the Public Health Policy and Management concentration  
**(in addition to the medical school curriculum)**

## MD/MPH – Phoenix Campus Dual Degree with Clinical Leadership

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The MD/MPH Clinical Leadership Degree comprises 42 units of coursework and experiential learning that leads to a Master's of Public Health in Clinical Leadership. The MPH requirements are summarized below:

### **Effective for those following the 2021/2022 academic curriculum guide**

#### *MPH Clinical Leadership*

#### **MINIMUM CREDIT REQUIREMENTS – (42 units)**

- EPID 573A    Basic Principles of Epidemiology (3)
- PHPM 574    Public Health Policy & Management (3)
- EHS 575     Environmental & Occupational Health (3)
- BIOS 576A   Biostatistics in Public Health (3)
- HPS 577     Sociocultural & Behavioral Aspects of Public Health (3)
- PHPM 580    Integrated Public Health Learning Experience - **MPH capstone course** (1)
- PHPM 570    Issues and Trends in Public Health (3)
- PHP 572     Applied Public Health Practice (3)
- PHPM 696I   Clinical Leadership and Administration (4)
- PHPM 909    Master's Report (internship) (11)
- Electives (5) - *Chosen in consultation with your faculty mentor*
- Internship Preparation Workshop  
(**required**; non-credit)
- Interprofessional Education Activities  
(**documentation required**; non-credit)

#### **Total Required Credit Hours: 42**

to complete the MPH degree in the Clinical Leadership concentration  
***(in addition to the medical school curriculum)***

## Latin American Studies MPH/MA

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. All MPH concentration areas have a minimum of 42 units (with the exception of the EOH – Industrial Hygiene track, which requires a minimum of 45 units). A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit, and a maximum of 15 units may be shared between the MPH and LAS degrees. Students work with academic advisors in both programs to determine their specific course requirements.



## MPH/MA – Latin American Studies

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### Effective for those following the 2021/2022 academic curriculum guide Latin American Studies (LAS) MA Requirements - (36+ graduate units)

LAS 500 Introduction to Latin American Studies (3)

LAS 550 Research Methods Course (required for students completing thesis)

or Interdisciplinary Seminar Course approved by LAS advisor (3)

- 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 & Management (3)

EHS 575 Environmental & Occupational Health (3)

BIOS 576A Biostatistics in Public Health (3)

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

\* 580 Integrated Public Health Learning Experience - **MPH capstone course** (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities

(**documentation required**; non-credit)

**INTERNSHIP** - \* 909 Master's Report "Internship" (3-6 units) \*\*

#### REQUIRED CONCENTRATION COURSES - (11 - 23 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 MPH/MS

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.



## MPH/MS – Mexican American Studies

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### Effective for those following the 2020/2021 academic curriculum guide

#### Mexican American Studies MS Requirements - (33 units)

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.

##### 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 535 Mexican Traditional Medicine (3)  
or MAS 505 Traditional Indian Medicine (3)

MAS Course based on student's specialization (3)

##### ELECTIVE COURSES – (minimum 6 units, approved by Faculty Advisor)

##### THESIS OR EXAMINATION OPTION - (6 units)

#### 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 & Management (3)
- EHS 575 Environmental & Occupational Health (3)
- BIOS 576A Biostatistics in Public Health (3)
- HPS 577 Sociocultural & Behavioral Aspects of Public Health (3)
- \* 580 Integrated Public Health Learning Experience - **MPH capstone course** (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities

(**documentation required**; non-credit)

**INTERNSHIP** - \*909 Master's Report "Internship" (3-6 units) \*\*

##### REQUIRED CONCENTRATION COURSES - (11 - 23 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 minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit.



## Law JD/MPH

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 for dual degree students is 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 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.

### Effective for those following the 2021/2022 academic curriculum guide

#### Juris Doctor (J.D.) Requirements

The College of Law offers an interdisciplinary Juris Doctor degree. Students may apply up to 15 units of MPH credit to the JD degree and must earn a total of 112 units combined between the programs. Students work with an advisor in the College of Law to determine their specific course requirements. The JD/MPH is typically a four-year program.

#### Master in Public Health Requirements - (minimum of 42 units)

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 & Management (3)
- EHS 575 Environmental & Occupational Health (3)
- BIOS 576A Biostatistics in Public Health (3)
- HPS 577 Sociocultural & Behavioral Aspects of Public Health (3)
- \* 580 Integrated Public Health Learning Experience - **MPH capstone course** (1)
- Internship Preparation Workshop  
(**required**; non-credit; semester before internship begins)
- Interprofessional Education Activities  
(**documentation required**; non-credit)
- INTERNSHIP** - \*909 Master's Report "Internship" (3-6 units) \*\*

#### REQUIRED CONCENTRATION COURSES - (11 - 23 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 minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit.

**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 MPH/MBA

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 75-79 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 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.

## MPH/MBA – Business Administration

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Effective for those following the 2021/2022 academic curriculum guide

### 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 48 graduate units to successfully complete the MBA degree program. Students must be enrolled for full academic year as an MBA student.

#### CORE COURSES - (32 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.

#### ELECTIVES - (16 units)

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

### Master in Public Health Requirements - (minimum of 42 units)

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 MBA curriculum*).

#### CORE COURSES - (16 units)

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & Occupational Health (3)
BIOS 576A	Biostatistics in Public Health (3)
HPS 577	Sociocultural & Behavioral Aspects of Public Health (3)
* 580	Integrated Public Health Learning Experience - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities

(**documentation required**; non-credit)

**INTERNSHIP** - \*909 Master's Report "Internship" (3-6 units) \*\*

**REQUIRED CONCENTRATION COURSES - (11 - 23 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 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 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.

**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 PharmD/MPH

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 individually and separately.
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.





## PharmD/MPH – Pharmacy

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**Effective for those following the 2021/2022 academic curriculum guide**

### Doctor of Pharmacy Requirements

The College of Pharmacy requires eight units of professional electives (non-practicum) and 15 units of practicum electives for the PharmD program. Total units for the PharmD Program is 142 units.

### Master in Public Health Requirements - *(minimum of 42 units)*

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 & Management (3)
- EHS 575        Environmental & Occupational Health (3)
- BIOS 576A     Biostatistics in Public Health (3)
- HPS 577        Sociocultural & Behavioral Aspects of Public Health (3)
- \* 580            Integrated Public Health Learning Experience - **MPH capstone course** (1)

Internship Preparation Workshop

**(required;** non-credit; semester before internship begins)

Interprofessional Education Activities

**(documentation required;** non-credit)

**INTERNSHIP** - \*909 Master's Report "Internship" (3-6 units) \*

(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.

### REQUIRED CONCENTRATION COURSES - *(18 - 27 units)*

Each MEZCOPH concentration has an additional group of required courses and electives to make up the 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.

\* 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.

**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>

## Nursing DNP/MPH (Online)

**Program will be effective pending university level approval starting in the 2021-2022 academic year.**

The fully online DNP/MPH Dual Degree Program is offered in partnership with the University of Arizona Mel and Enid Zuckerman College of Public Health and the College of Nursing. The DNP/MPH dual degree program allows students to earn a Master of Public Health (MPH) and a Doctor of Nursing Practice (DNP) degree which will prepare students for a wide range of career opportunities in Public Health Nursing. It is available to students enrolled in the Arizona Online campus only.

Students in the DNP/MPH dual degree program complete the separate requirements for the MPH and DNP degrees in three and a half years, upon the completion of a minimum of 81-95 units in Public Health and Nursing. Students will take courses for both programs simultaneously and work with their advisors to determine how they can coordinate their class schedules to meet both degree requirements. There are two dual degree options available: a DNP Family Nurse Practitioner/MPH Health Behavior Health Promotion, and a DNP Executive Health Systems Leadership/MPH Health Services Administration.



## DNP/MPH – Nursing (Online)

### Executive Health Systems Leadership/Health Services Administration

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**Effective for those following the 2021/2022 academic curriculum guide**

**Program will be effective pending university level approval starting in the 2021-2022 academic year.**

#### **Doctor of Nursing Practice (DNP) in Executive Health Systems Leadership Requirements**

The College of Nursing offers an online Doctor of Nursing Practice degree with a specialty in Executive Health Systems Leadership. Admitted students will begin the program by attending a Resident Intensive Summer Experience (RISE) and NURS 695B Forum that continues through their initial fall semester. The DNP in EHSL consists of 50 units and requires a total of 540 Clinical Practicum hours upon completion. Students should consult with their advisor to determine which Public Health courses may apply toward DNP requirements.

#### **Master in Public Health Requirements - (minimum of 42 units)**

The Mel and Enid Zuckerman College of Public Health offers an online Master in Public Health with a concentration in Health Services Administration. Students need a minimum of 42 units, in order to complete the MPH degree. Students should consult with their advisor to determine which NURS courses may transfer in and apply toward MPH degree requirements.\*\*

#### **CORE COURSES - (19 units)**

EPID 573A	Basic Principles of Epidemiology (3)
PHPM 569	Fundamentals of Health Budgeting and Financial Management (3)
PHPM 574	Public Health Policy & Management (3)
EHS 575	Environmental & 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 - <b>MPH capstone course</b> (1)

Internship Preparation Workshop

**(required;** non-credit; semester before internship begins)

Interprofessional Education Activities

**(documentation required;** non-credit)

#### **HEALTH SERVICES ADMINISTRATION COURSES - (23 units)**

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

\*\* A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit.

**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>

## DNP/MPH – Nursing (Online) Family Nurse Practitioner/Health Behavior Health Promotion

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**Effective for those following the 2021/2022 academic curriculum guide**

**Program will be effective pending university level approval starting in the 2021-2022 academic year.**

### **Doctor of Nursing Practice (DNP) in Executive Health Systems Leadership Requirements**

The College of Nursing offers an online Doctor of Nursing Practice degree with a specialty in Family Nurse Practitioner. Admitted students will begin the program by attending a Resident Intensive Summer Experience (RISE) that continues through their initial fall semester.

The DNP in FNP consists of 68 units and requires a total of 720 Clinical Practicum hours upon completion. Students should consult with their advisor to determine which Public Health courses may apply toward DNP requirements.

### **Master in Public Health Requirements - (minimum of 42 units)**

The Mel and Enid Zuckerman College of Public Health offers an online Master in Public Health with a concentration in Health Services Administration. Students need a minimum of 42 units, in order to complete the MPH degree. Students should consult with their advisor to determine which NURS courses may transfer in and apply toward MPH degree requirements.\*\*

#### **CORE COURSES - (16 units)**

- EPID 573A      Basic Principles of Epidemiology (3)
- PHPM 574      Public Health Policy & Management (3)
- EHS 575        Environmental & Occupational Health (3)
- BIOS 576A     Biostatistics in Public Health (3)
- HPS 577        Sociocultural & Behavioral Aspects of Public Health (3)
- HPS 580        Integrated Public Health Learning Experience - **MPH capstone course** (1)

Internship Preparation Workshop

(**required**; non-credit; semester before internship begins)

Interprofessional Education Activities

(**documentation required**; non-credit)

#### **HEALTH SERVICES ADMINISTRATION COURSES - (26 units)**

- HPS 531        Contemporary Health Issues & 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 909        Master's Report "Internship" (5)

Elective Courses ( minimum 9 units approved by Faculty Mentor)

\*\* A minimum of 50% of credit hours must be unique to each degree and cannot be used for dual credit.

**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>

# EPIDEMIOLOGY AND BIostatISTICS

## Master of Science in Biostatistics

Edward J. Bedrick, PhD -Program Director

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 MS in Biostatistics program level competencies on the [program website](#) define professional skills that students are expected to acquire upon graduating from the program.

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.



## MS – Biostatistics Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **REQUIRED COURSES - (24 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 688	Statistical Consulting (3)
MATH 564	Theory of Probability (3)
MATH 566	Theory of Statistics (3)

\* (For students who have met the core competencies in BIOS 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).

### **COMPUTATIONAL/MODERN METHODS MODULE - (6 units, at least 3 credits must be BIOS 576D or BIOS 511)**

BIOS 576D	Data Management and the SAS Programming Language (3)
BIOS 511	Healthcare Data Science (3)
STAT 675	Statistical Computing (3)
BIOS 648	Analysis of High Dimensional Data (3)

### **CULMINATING EXPERIENCE - choose one option (3-6 units)**

Option 1: MS Project - 3 units from the following courses:

BIOS 699	Independent Study (3)
BIOS 900	Research (3)

**OR** Option 2: MS Thesis - (6 units)

BIOS 910	Thesis (6)
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## **Total Required Credit Hours: 33-36**

### **OTHER REQUIREMENTS:**

**Professional Communication Component:** Oral presentation of MS thesis or project.

**Professional Portfolio:** Must include a resume, at least 2 data analysis reports, copy of thesis or MS project report, documentation of computing proficiency, pdf/powerpoint of oral presentation. Student's portfolio is to be approved by academic advisor.

**Examinations:** Students are required to take and pass both the Applied and Theory QEs.



## Master of Science in Environmental Health Sciences

Aminata Kilungo, PhD -Program Director

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 advisor and approved by the student's Graduate Committee and Director of the Environmental Health Sciences Program. The MS degree program requires approximately two to three years for completion including development and defense of a research thesis. The MS in Environmental Health Sciences program level competencies on the program website, define professional skills that students are expected to acquire upon graduating from the program. 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.

## MS – Environmental Health Sciences Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **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)

\* (For students who have met the core competencies in EHS 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).

### **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)**

**Total Required Credit Hours: 42**



# EPIDEMIOLOGY AND BIostatISTICS

## Master of Science in Epidemiology

Kacey Ernst, PhD, MPH – Program Director

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.

The MS in Epidemiology program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.



## MS – Epidemiology Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **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)
	<u>or</u> 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)

\* (For students who have met the core competencies in EPID 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).

### **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)**

**Total Required Credit Hours: 42**



## MS – Epidemiology Curriculum

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### Clinical Epidemiology Track

#### Effective for those following the 2021/2022 academic curriculum guide

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.

#### **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 for 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 - (7 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 ( minimum 6 units)**

\*This course is only offered in the fall semester.

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

# (For students who have met the core competencies in EPID 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).

### **Total Required Credit Hours: 42**



# DOCTORAL PROGRAMS

## MEZCOPH 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 level competencies on the program website, define professional skills that students are expected to acquire upon graduating from the program.

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.



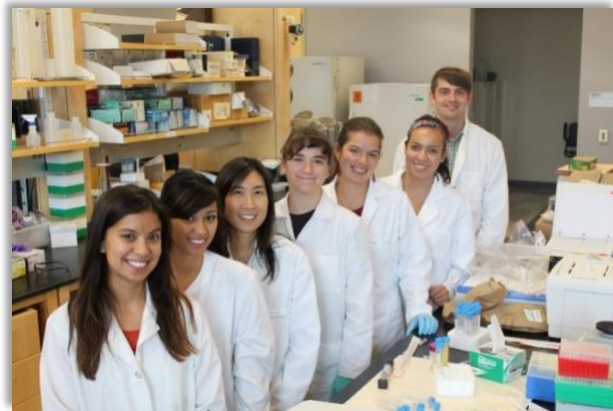
### DrPH Options:

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.



## Doctorate in Public Health in Maternal and Child Health

Purnima Madivanan MBBS, MPH, PhD – Program Director

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 involve coursework, the written and oral comprehensive examination, 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.



## DrPH – Maternal and Child Health Curriculum & Recommended Course Sequencing

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Effective for those following the 2021/2022 academic curriculum guide

### REQUIRED COURSES

Of the 55 credit hours in the major, 14 are courses required of all students earning a DrPH within the College; 16 are specific to the Maternal and Child Health 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 include a minimum of 9 units. ***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.*** The DrPH in Maternal and Child Health program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.

### 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) <b>or</b> 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.

### 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.

### 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 MATERNAL AND CHILD HEALTH REQUIRED COURSES - (16 units)**

Students who have not taken HPS 586 Maternal and Child Health or its equivalent are required to take the course as a prerequisite and it may be used to fulfill elective requirements.

HPS 565	Public Health Advocacy (3)
HPS 682	Women and Children Health Policy (3)
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 Participatory Action Research to Decrease Health Disparities (3)
597	Service Learning Course (Offered within the College. Options shown on this page) (1) #

**NOTES**

\* HPS 620A and HPS 620B are taken together over one year. Students may speak with their advisor if they prefer to take the HPS 652 Grantsmanship for a Winning Proposal in place of HPS 620B.

**# Service Learning Course (1 unit):****Choose (1) course from the following:**

HPS 597A	Maternal & Child Health Programs in Urban Settings (1) – <i>(offered Spring - Tucson)</i>
HPS 597B	Maternal & Child Health Programs in the Rural Southwest (1) – <i>(offered Summer - location varies)</i>
HPS 597E	Public Health for Community Wellness (2) – <i>(offered Fall and Spring)</i>
PHP 597C	Border Health Service Learning Institute (1) – <i>(offered Summer - US/Mexico Border)</i>
PHP 597F	Phoenix Urban Service Learning (1) – <i>(offered Winter - Phoenix)</i>
PHPM 597D	Rural Health Service Learning Institute (1)– <i>(offered Spring location varies)</i>
EPID 597S	Skin Cancer Prevention in the Community Setting (1-2) – <i>(offered Fall and Spring)</i>

**Total Required Credit Hours: 64**



## Doctorate in Public Health in Public Health Policy and Management

Joe Gerald, MD, PhD -Program Director

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.



The DrPH in Public Health Policy and Management program level competencies on the program website, define professional skills that students are expected to acquire upon graduating from the program. 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.





## DrPH – Public Health Policy & Management Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **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)
PHPM 609	Evaluating the Public Health Literature (1 unit; 2 times) <sup>1</sup>
HPS 544	Fundamentals of Evaluation (3) <b>or</b> alternate (3) (approved by Faculty Advisor)
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) <sup>2</sup> Higher Level Methods Course (3) <sup>2</sup>

### **ELECTIVES - (minimum 9 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 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.

### **NOTES**

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

<sup>2</sup> With approval of faculty advisor

**Total Required Credit Hours: 64**

## 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>

# EPIDEMIOLOGY AND BIostatISTICS

## Doctor of Philosophy in Biostatistics

Edward J. Bedrick, PhD – Program Director

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 to three years of this time is usually devoted to coursework, the comprehensive doctoral examination, 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. The PhD in Biostatistics program level competencies on the [program website](#) define professional skills that students are expected to acquire upon graduating from the program.

### **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 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 – Biostatistics Curriculum

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### Effective for those following the 2021/2022 academic curriculum guide

#### 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; <b>2 times</b> )
BIOS 609	Evaluating Public Health Literature (1)
BIOS 585	Public Health Fundamentals for Researchers (3) *

\* (For students who have met the core competencies in BIOS 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).

#### ELECTIVE COURSES - (12 units)

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

BIOS 511	Healthcare Data Science (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 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)

**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.

#### DISSERTATION - (minimum of 18 units) – required

**Total Required Credit Hours: 74**



## PhD Minor – Biostatistics Curriculum

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### Effective for those following the 2021/2022 academic curriculum guide

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 511	Healthcare Data Science (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 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



## Doctor of Philosophy in Environmental Health Sciences

Aminata Kilungo, PhD – Program Director

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. The PhD in Environmental Health Sciences program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program

## PhD – Environmental Health Sciences Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **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)
EHS 609	Evaluating Public Health Literature (1)
EHS 696R	Environmental Health Seminar (1 unit each semester – <b>5 times</b> )

\* (For students who have met the core competencies in EHS 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).

### **ELECTIVE COURSES - (minimum of 18 units)**

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

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.

**DISSERTATION - (minimum of 18 units) – required**

**Total Required Credit Hours: 72**

## PhD Minor – Environmental Health Sciences Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

**The PhD minor in Environmental Health Sciences** is for majors outside Environmental Health Sciences and is administered by the Environmental Health Sciences (EHS) concentrator 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**

**MINIMUM CREDIT REQUIREMENTS** - (*at least 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 Program Coordinator, in the MEZCOPH Office of Student Services (Drachman Hall, Room A302).



# EPIDEMIOLOGY AND BIOSTATISTICS

## Doctor of Philosophy in Epidemiology

Kacey Ernst, PhD, MPH – Program Director

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 HIV/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. The PhD in Epidemiology program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.

## PhD – Epidemiology Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

### **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)
EPID 609	Evaluating the Public Health Literature (1 unit, <i><b>fall semester of first year</b></i> )
EPID 660	Infectious Disease Epidemiology (3)
EPID 670	Chronic Disease Epidemiology (3)
EPID 696A	Epidemiology Seminar (1 unit – <b>3 times</b> ) ( <b>or equivalent</b> approved by Faculty Advisor)
EPID 796A	Epidemiology Doctoral Seminar (1 unit – <b>2 times</b> )

\* (For students who have met the core competencies in EPID 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).

**ELECTIVE COURSES – 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. A maximum of 10 units of Independent Study/Research Credit (EPID 599, 699, 799, 900) may be used.

**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**

**Total Required Credit Hours: 73**

## PhD Minor – Epidemiology Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

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.





## Doctor of Philosophy in Health Behavior Health Promotion

Nicole Yuan, PhD, MPH – Program Director

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. The MSPH/PhD in Health Behavior Health Promotion program level competencies on the [program website](#), define professional skills that students are expected to acquire upon graduating from the program.



## PhD – Health Behavior Health Promotion Curriculum

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### Effective for those following the 2021/2022 academic curriculum guide

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) <sup>1</sup>
HPS 585	Public Health Fundamentals for Researchers (3) <sup>2</sup>
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) <sup>3</sup>
HPS 620B	Advanced Research Methods in Health Promotion II (3) <sup>3</sup>
HPS 696L	Health Behavior Health Promotion Seminar (1 unit; <b>2 times</b> ) <sup>3</sup>

#### **REQUIRES U.S. MINORITY/HEALTH DISPARITIES COURSE - (minimum 3 units)**

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

#### **NOTES**

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> Permanent courses addressing this content as assessed by the Program Director are acceptable substitutions.

**REQUIRED HEALTH PROMOTION EMPHASIS ELECTIVES - (minimum of 3 units) <sup>4</sup>**

- HPS 531 Contemporary Health Issues & Research (3)  
HPS 532A Applied Aspects of Program Planning, Implementation & Evaluation I (4)  
HPS 535 Multicultural Health Beliefs (3) <sup>5</sup>  
HPS 577 Sociocultural & Behavioral Aspects of Public Health (3)  
HPS 605 Community Based Participatory Action Research to Decrease Health Disparities (3) <sup>5</sup>  
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)

**NOTES**

<sup>4</sup> Another health promotion related graduate course may be substituted with approval of the student's Faculty Advisor

<sup>5</sup> (if not already used to fulfill the US minority health/disparities requirement)

**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**

**Total Required Credit Hours: 63**



## **MSPH/PhD – Health Behavior Health Promotion Curriculum**

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**Effective for those following the 2021/2022 academic curriculum guide**

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) <sup>1</sup>  
BIOS 576A Biostatistics in Public Health (3)  
BIOS 576B Biostatistics for Research (3) <sup>2</sup>  
HPS 607 Qualitative Research Methods in Public Health (3)  
HPS 620A Advanced Research Methods in Health Promotion I (3) <sup>3</sup>  
HPS 620B Advanced Research Methods in Health Promotion II (3) <sup>3</sup>  
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 U.S. MINORITY/HEALTH DISPARITIES COURSE - (minimum 3 units)**

HPS 535 Multicultural Health Beliefs (3) <sup>4</sup>  
**or** HPS 605 Community Based Participatory Action Research to Decrease Health Disparities (3) <sup>4</sup>

#### **OTHER ELECTIVES - (minimum 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) <sup>3</sup>

HPS Selective Course (minimum of 4 units)

**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**

**NOTES**

<sup>1</sup> (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).

<sup>2</sup> **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.

<sup>3</sup> Permanent courses addressing this content as assessed by the Program Director are acceptable substitutions.

<sup>4</sup> (if not already used to fulfill the US minority health/disparities requirement)

**Total Required Credit Hours: 73**





## PhD Minor – Health Behavior Health Promotion Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

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.

### PHD MINOR IN HEALTH BEHAVIOR HEALTH PROMOTION

#### REQUIRED COURSES - (*at least 12 units*):

Take one course from the following:

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

Choose one course on U.S. 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 course on Health Promotion Science related content - (*minimum 6 units*) <sup>1</sup>

<sup>1</sup> 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.





# CERTIFICATE PROGRAMS

## Graduate Certificate Programs

The University of Arizona Mel and Enid Zuckerman College of Public Health is committed to serving the public health educational needs of working professionals in the State of Arizona and beyond. In addition to offering curriculum at the undergraduate and graduate levels, we offer five graduate certificate programs. Designed for working professionals and/or those exploring the field of public health, the certificate programs provide skill enhancement for both domestic and international participants who have limited time to pursue a campus-based full graduate degree program.

- The [Clinical & Translational Research Graduate Certificate](#) prepares interprofessional scientists for the complexities of clinical and translational research through high-quality didactic instruction, and mentored collaborative research experiences.
- The [Graduate Certificate in Global Health & Development](#) is a distance-learning program that provides participants the foundation knowledge and skills necessary to function effectively in global health practice, whether at home in a diverse setting, along the border in a bi-cultural environment, or abroad where populations are under-resourced and where health systems are constrained.
- The [Graduate Certificate in Health Administration](#) offers Tucson or Phoenix-based working health professionals and graduate students an opportunity to advance their health administration training. Upon completion of the certificate program, students will have knowledge and skills in the following areas: strategic planning, budgeting and finance, health care economics and policy, and advanced health care services administration.
- The [Graduate Certificate in One Health](#) is a distance learning program that consists of 4 courses (12 units) designed to meet the needs of students and professionals. Coursework focuses on a broader view of the multidisciplinary approaches needed to holistically address the interconnectedness of animals, humans, and the environment and related health impacts.
- The [Graduate Certificate in Public Health](#) is a distance-learning program that offers working professionals a flexible and convenient option for advancing their public health training. The certificate is affiliated with the Master of Public Health (MPH) degree and consists of the five core courses that are required of all MPH graduates.

## Clinical & Translational Research Graduate Certificate Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

***A minimum of 13 units are required for the Clinical & Translational Research graduate certificate.***

***Admission to the certificate requires completion of a master's degree with a 3.0 cumulative GPA.***

**DESCRIPTION:**

The University of Arizona's Clinical & Translational Research (ACTR) graduate certificate program prepares interprofessional scientists for the complexities of clinical & translational research through high-quality didactic instruction, and mentored collaborative research experiences. Clinical and translational research is fundamental for prevention, treatment, diagnosis and relief of symptoms of disease in human populations. Worldwide, there is an increasing need for highly qualified clinical researchers. The ACTR graduate certificate program has a strong track record for training interprofessional translational clinical researchers.

**REQUIRED - (7 units)**

EPID 573A	Basic Principles of Epidemiology (3)
BIOS 576A	Biostatistics for Public Health (3)
EPID 696T	Clinical & Translational Research Seminar (1)

**REQUIRED SELECTIVES - (3-6 units)**

Choose a minimum of 3 units; maximum of 6 units may apply to certificate requirements.

BIOS 576B	Biostatistics for Research (3)
BIOS 576D	Data Management & SAS Programming (3)
EPID 678	Principles of Public Health & Health Informatics (3)

**ELECTIVES - (0-3 units) \***

Choose 0 – 3 units to reach minimum certificate requirement of 13 units total.

BIOS 503	Intro to Statistical Analysis using STATA (1)
BIOS 504	Intro to Statistical Analysis using SAS (1)
EPID 573B	Epidemiologic Methods (3)
EPID 573C	Advanced Epidemiology (3)
HPS 652	Grantsmanship for a Winning Proposal (3)
BIOS 675	Clinical Trials and Interventions Studies (3)
EPID 696A	Epidemiology Seminar (1)
BIOS 696S	Biostatistics Seminar (1)

\* Other possible elective courses can be found on the [MEZCOPH website](#). Elective courses not on the above list must first be approved by the Director of Graduate Studies of the ACTR Certificate program

## Graduate Certificate in Global Health & Development Curriculum

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**Effective for those following the 2021/2022 academic curriculum guide**

***A total of 13 units is required, with 11 units of required coursework and 2 units of elective coursework.***

***Admission to the certificate requires completion of an undergraduate degree with a 3.0 GPA (based on the last 60 units).***

The Mel and Enid Zuckerman College of Public Health (MEZCOPH) houses the Global Health Institute (GHI), one of the many centers of excellence in education, research, and service of the University of Arizona's Health Sciences Center. GHI is dedicated to finding evidence-based solutions to global health problems through the education and training of tomorrow's global health leaders. It is a unique partnership that promotes collaboration between the University of Arizona, partner universities, organizations, and individuals around the world.

The Graduate Certificate in Global Health & Development is one of the flagship education programs of the GHI. Designed for professionals and those entering the field of global health, this online program is a flexible option for those who wish to balance coursework and career, while maintaining an environment of utmost academic rigor. The course meets the need for skill enhancement for both foreign and domestic individuals who have limited time to pursue a campus-based full degree program.

### **REQUIRED - (11 units)**

- HPS 533            Global Health (3)
- HPS 529            Project Design & Implementation in Global Health (3)
- HPS 530            Nutrition, Health & Development (2)
- HPS 534            Infectious Diseases, Global Health & Development (3)

### **INDEPENDENT STUDY - (2 units)**

- HPS 599            Independent Study in Global Health & Development Issues (2)





## Graduate Certificate in Health Administration Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 15 units are required for the graduate certificate in Health Administration. Admission to the certificate requires completion of an undergraduate degree with a 3.0 GPA (based on the last 60 units).***

### **DESCRIPTION:**

The Graduate Certificate in Health Administration offers Tucson or Phoenix-based working health professionals and graduate students an opportunity to advance their health administration training. Upon completion of the certificate program, students will have knowledge and skills in the following areas: strategic planning, budgeting and finance, health care economics and policy, and advanced health care services administration.

### **REQUIRED** - (15 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)

**or** PHP 641 Health Systems Delivery (3) \*

PHPM 569 Fundamentals of Health Budgeting and Financial Management (3)

\* effective spring 2022, students may take PHPM 562 or PHP 641 to complete the certificate



## Graduate Certificate in One Health Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 12 units are required for the graduate certificate in One Health.***

***Admission to the certificate requires completion of an undergraduate degree with a 3.0 GPA cumulative or in last 60 units.***

### **DESCRIPTION:**

One Health is an academic discipline that has been recognized worldwide as a way to understand and address global challenges related to health. The One Health paradigm recognizes connections among the health of animals, the environment, and humans. New strategies are needed to cope with changing ecosystems that lead to altered patterns of disease transmission. Zoonotic infections (i.e., those spread between animals and people) are common in the U.S. and globally, such as the COVID-19 outbreak.

The Graduate Certificate in One Health is intended to 1) enhance the education of graduate students and professional students beyond their regular course of study; and 2) provide additional training to professions already in the field including researchers, Public Health practitioners, those in the medical field and others.

### **REQUIRED - (9 units)**

EHS/EPID 545	One Health Foundations (3)
EHS 551	One Health Systems Thinking (3)
EHS 546	One Health Approach and Case Studies (3)

### **ELECTIVE - (3 units)**

Select from:

HPS 533	Global Health (3)
HPS 577	Social and Behavioral Aspects of Public Health (3)
HPS 559	Management of Global Public Health Emergencies (3)





## Graduate Certificate in Public Health Curriculum

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Effective for those following the 2021/2022 academic curriculum guide

***A minimum of 15 units are required for the graduate certificate in Public Health.***

***Admission to the certificate requires completion of an undergraduate degree with a 3.0 GPA cumulative or in last 60 units.***

### **DESCRIPTION:**

The Graduate Certificate in Public Health is a distance-learning program at the UA Zuckerman College of Public Health that offers working professionals a flexible and convenient option for advancing their public health training. The certificate is affiliated with the Master of Public Health (MPH) degree and consists of the five core courses that are required of all MPH graduates.

As a fully online program, the certificate is offered as part of the UA Online Campus. It is a variable schedule program that can be completed in one to four years. Students enrolled in a UA Online Campus program are restricted to taking only those courses offered through the campus and may not register in Main Campus courses while in the program. Upon completion of the certificate, students who are admitted to the MPH program may apply all fifteen credits to their degree.

### **REQUIRED - (15 units)**

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

