

UC Berkeley  
School of Public Health

# Self-Study Report

PREPARED FOR THE COUNCIL ON  
EDUCATION FOR PUBLIC HEALTH

March 2023

Berkeley Public  
Health

Table of Contents	Page
Abbreviations and Acronyms	
Introduction	1
A1. Organization and Administrative Processes	9
A2. Multi-Partner Schools and Programs	21
A3. Student Engagement	22
A4. Autonomy for Schools of Public Health	24
A5. Degree Offerings in Schools of Public Health	25
B1. Guiding Statements	27
B2. Evaluation and Quality Improvement	30
B3. Graduation Rates	49
B4. Post-Graduation Outcomes	55
B5. Alumni Perceptions of Curricular Effectiveness	58
C1. Fiscal Resources	63
C2. Faculty Resources	70
C3. Staff and Other Personnel Resources	78
C4. Physical Resources	80
C5. Information and Technology Resources	82
D1. MPH and DrPH Foundational Public Health Knowledge	87
D2. MPH Foundational Competencies	91
D3. DrPH Foundational Competencies	158
D4. MPH and DrPH Concentration Competencies	171
D5. MPH Applied Practice Experience	217
D6. DrPH Applied Practice Experience	222
D7. MPH Integrative Learning Experience	225
D8. DrPH Integrative Learning Experience	242
D9. Public Health Bachelor's Degree Foundational Domains	246
D10. Public Health Bachelor's Degree Foundational Competencies	257
D11. Public Health Bachelor's Degree Cumulative and Experiential Activities	263
D12. Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	267
D13. MPH Program Length	270
D14. DrPH Program Length	272
D15. Bachelor's Degree Program Length	273
D16. Academic & Highly Specialized Public Health Master's Degree	275
D17. Academic Public Health Doctoral Degrees	296
D18. All Remaining Degrees	321
D19. Distance Education	322
E1. Faculty Alignment with Degrees Offered	327
E2. Integration of Faculty with Practice Experience	345
E3. Faculty Instructional Effectiveness	347
E4. Faculty Scholarship	355
E5. Faculty Extramural Service	363
F1. Community Involvement in School Evaluation and Assessment	367
F2. Student Involvement in Community and Professional Service	376
F3. Delivery of Professional Development Opportunities for the Workforce	385
G1. Diversity and Cultural Competence	389



<b>Table of Contents</b>	<b>Page</b>
H1. Academic Advising	411
H2. Career Advising	424
H3. Student Complaint Procedures	433
H4. Student Recruitment and Admissions	437
H5. Publication of Educational Offerings	448

## Abbreviations and Acronyms

---

AP	Academic Personnel
APC	Academic Personnel Committee
APE	Applied Practice Experience
APM	Academic Personnel Manual
ARC4JSTC	Anti-Racist Community for Justice and Social Transformative Change Program
ASPPH	Association of Schools & Programs of Public Health
AY	Academic Year
BA	Bachelor of Arts
BIOSTAT	Biostatistics
BRDO	Berkeley Research Development Office
CAB	Community Advisory Board
CDC	Centers for Disease Control and Infection
CEPH	Council on Education for Public Health
CGA	Contracts and Grants Accounting
CHS	Community Health Sciences
COCI	UC Berkeley Committee on Curriculum and Instruction
COSA	Committee on Student Affairs
CV	Curriculum Vitae
DEIB	Diversity, Equity, Inclusion, & Belonging
DICE	Diversity, Inclusion, Community, and Equity Committee
DREAM	Diversity, Respect, Equity, Action, Multiculturalism Office
DrPH	Doctor of Public Health
EHS	Environmental Health Sciences
EPCC	Education Policy and Curriculum Committee
EPI	Epidemiology
ERF	Electronic Resource File
ERF	Electronic Resource File
EVCP	Executive Vice Chancellor and Provost
FAC	Faculty Council
FLA	Anti-Racist Pedagogy Faculty Leadership Academy
FTE	Full-time Equivalent
GA	UC Berkeley Graduate Assembly
GC	UC Berkeley Graduate Council
GHE	Global Health and Environment
GSI	Graduate Student Instructor
HGA	Head Graduate Adviser
HP	Health Policy
HPM	Health Policy and Management
HSB	Health and Social Behavior
IDI	Infectious Disease and Immunology



IDV	Infectious Disease and Vaccinology
ILE	Integrative Learning Experience
JMP	Joint Medical Program
LR	Legislative Ruling
MA	Master of Arts
MBA	Master of Business Administration
MCAH	Maternal, Child, and Adolescent Health
MCP	Master of City Planning
MD	Doctor of Medicine
MJ	Master of Journalism
MPA	Master of Public Administration
MPH	Master of Public Health
MPP	Master of Public Policy
MS	Master of Science
MS	Master of Science
MSW	Master of Social Work
OFEW	UC Berkeley Office of Faculty Equity and Welfare
OOMPH	Online Master of Public Health
PDST	Professional Degree Supplemental Tuition
PHAA	Public Health Alumni Association
PhD	Doctor of Philosophy
PHN	Public Health Nutrition
PIF	Primary Instructional Faculty
PUB HLTH	Public Health
SAC	Staff Advisory Committee
SPH	School of Public Health
SPHSG	School of Public Health Student Government
SPO	UC Berkeley Sponsored Projects Office
SSGDP	Self-Supporting Graduate Degree Program
TRAC	Teaching Research Advisory Committee
UC	University of California
UCB	UC Berkeley
UCSF	University of California, San Francisco
UGMC	Undergraduate Management Committee
URM	Under-Represented Minority

---

## Introduction

---

### **(1) Describe the institutional environment, which includes the following:**

#### **a. year institution was established and its type (e.g., private, public, land-grant, etc.)**

The University of California was created in 1868 by state law with the merger of the College of California and the Agricultural, Mining, and Mechanical Arts College, a land grant institution. The intent was to blend the curricula of both institutions to form “a complete university.” The new University of California was built on a site in Berkeley. Consistent with the rapidly expanding population of California and responding to the educational needs of the state, the University grew, adding academic programs and eventually new sites.

The UC Berkeley School of Public Health recognizes that UC Berkeley sits on the territory of xučyun (Huichin), the ancestral and unceded land of the Chochenyo speaking Ohlone people, the successors of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to the Muwekma Ohlone Tribe and other familial descendants of the Verona Band.

We recognize that every member of the Berkeley community has, and continues to benefit from, the use and occupation of this land, since the institution’s founding in 1868. Consistent with our values of community, inclusion and diversity, we have a responsibility to acknowledge and make visible the university’s relationship to Native peoples. As members of the Berkeley community, it is vitally important that we not only recognize the history of the land on which we stand, but also, we recognize that the Muwekma Ohlone people are alive and flourishing members of the Berkeley and broader Bay Area communities today.

#### **b. number of schools and colleges at the institution and the number of degrees offered by the institution at each level (bachelor’s, master’s, doctoral and professional preparation degrees)**

UC Berkeley houses fourteen colleges and schools and offers over 107 distinct undergraduate degrees (concentrated into 80 majors within 22 broad fields of study) and 120 graduate programs (master’s, professional, and doctoral), 90 of which grant doctoral degrees.

#### **c. number of university faculty, staff, and students**

As of October 2021, UC Berkeley enrolled some 31,800 undergraduate and 13,200 graduate students and employed more than 8,500 non-academic staff, 5,400 graduate students, 3,000 faculty and close to 3,200 other academic personnel.

#### **d. brief statement of distinguishing university facts and characteristics**

Today, Berkeley is part of a large system which includes 10 UC campuses located throughout the state of California. Although each campus is a member of the University of California system and each maintains a unique identity. Berkeley is particularly proud of its heritage as the original campus. Nationally, the 2022–23 *U.S. News & World Report*’s “Best Colleges” ranks Berkeley as a tie for the number one public university and 20th among national universities. The 2021 *Forbes* America’s Top Colleges report ranks Berkeley the top university among 600 private and public universities and liberal arts colleges in the United States. *Washington Monthly* ranked Berkeley 10th among national universities in 2021, with criteria based on research, community service, and social mobility. For 2020, QS World University Rankings places Berkeley fourth among all US universities and first among publics. The 2018–19 *Center for World University Rankings (CWUR)* ranked the university the top public university in the nation and fourth overall based on quality of education, alumni employment, quality of faculty, publications, influence, and citations. Globally, for 2020–21 Berkeley is ranked fourth by *U.S. News & World Report*, fifth by the



*Academic Ranking of World Universities (ARWU)*, and seventh by *Times Higher Education World University Rankings*.

The national and international awards held by faculty underscore Berkeley's preeminence. The current Berkeley faculty include 10 Nobel Laureates, along with 33 MacArthur Fellows and four Pulitzer Prize winners.

**e. names of all accrediting bodies (other than CEPH) to which the institution responds. The list must include the institutional accreditor for the university as well as all specialized accreditors to which any school, college or other organizational unit at the university responds**

UC Berkeley has been fully accredited since 1949 and its accreditation was reaffirmed most recently in 2015 under the Western Association of Schools and Colleges (WASC) pilot institutional review process. The campus will undergo a full accreditation review in 2024.

There are many other accreditations across campus similar to the CEPH accreditation; other academic units have their own accrediting bodies. University Health Services has an accreditation process and the UC Berkeley campus undergoes an accreditation process with the American Association for Accreditation of Laboratory Animal Care. However, for the campus as a whole, the foremost accreditation is prepared for the Western Association of Schools and Colleges.

In addition to CEPH, the School of Public Health responds to the following accrediting agencies:

- American Council for Graduate Medical Education (ACGME)
- Liaison Committee on Medical Education (LCME): UCB/UCSF Joint Medical Program

A complete list of UC Berkeley's specialized accreditors can be found in ERF Introduction 1.

**f. brief history and evolution of the school of public health (SPH) and related organizational elements, if applicable (e.g., date founded, educational focus, other degrees offered, rationale for offering public health education in unit, etc.)**

In 1942, the Northern California Public Health Association appointed a committee on the establishment of a school of public health in California, chaired by William P. Shepard, second vice president of Metropolitan Life Insurance Company, with strong endorsement by the California Medical Association. A year later, William Sheppard, Larry Arnstein, Karl F. Meyer, and other interested constituents successfully presented the necessity of a school of public health to the California State Legislature. The legislature enacted a law, signed by Governor Earl Warren, establishing the School of Public Health at the University of California. Shortly thereafter, in 1944, the school held its first commencement. It was accredited by the American Public Health Association two years later in 1946, becoming the only accredited school of public health west of the Mississippi River. The baccalaureate degree program continued, but the school began to devote much of its resources to graduate training, granting its first DrPH degree in 1947 and first PhD degree in 1960. In 1961, the school was accredited to offer MDs, a residency program in preventative medicine, the first school of public health to receive such accreditation. With the rapid growth of its graduate programs, the school ended its undergraduate degree program in 1968. In 1993, the CDC chose the school as one of the nine health promotion and disease prevention research centers around the nation.

Key programs established in the UC Berkeley School of Public Health from the 1970s through 1990s were:

- American Indian Graduate Program, formed in response to a need for more Native American health professionals,
- Minority Enrollment Program in response to California's growing multicultural population,
- San Francisco Men's Health Study providing key epidemiological support for the link between HIV and AIDS,
- UC Berkeley *Wellness Letter* and the *Wellness Guide*,

- Superfund Basic Research Program supported by the National Institute of Environmental Health Sciences,
- Suitcase Clinic addressing some of the health and social problems encountered by unhoused individuals,
- International health program,
- CDC California Emerging Infections Program,
- Peace Corps collaboration establishing the Master's Internationalist Program,
- Berkeley Health Sciences Initiative encouraging multidisciplinary research in the health sciences across the campus, and
- Nicholas C. Petris Center on Health Care Markets and Consumer Welfare.

By 2003, sponsored research activities expanded to over \$40 million annually and the school reestablished an upper-division undergraduate major in public health. Key activities in the 2000's included:

- Center for Health Research established as a University-wide effort to bring together UC Berkeley social scientists and other investigators to address challenging issues facing the health sector of society,
- Center for Infectious Disease Preparedness established,
- Senior health care leaders from countries around the world convened at Berkeley for the first Berkeley-Barcelona Advanced Health Leadership Forum,
- Center for Global Public Health and Center for Exposure Biology were established,
- School entered a partnership with Mexico's National Institute of Public Health (INSP) to collaborate on finding solutions to health issues throughout the United States, Mexico, and Latin America,
- Center for Health Leadership, Center for Health Technology, Center for Healthcare Organizational and Innovation Research, and Helen Wallace Center for maternal and child health were established, and
- The School of Public Health was the first school on the UC Berkeley campus to create an Office of Diversity which has evolved over the years into what we now call the DREAM office. With the creation of this office, underrepresented minority students have increased from under 10 percent to over 25 percent.

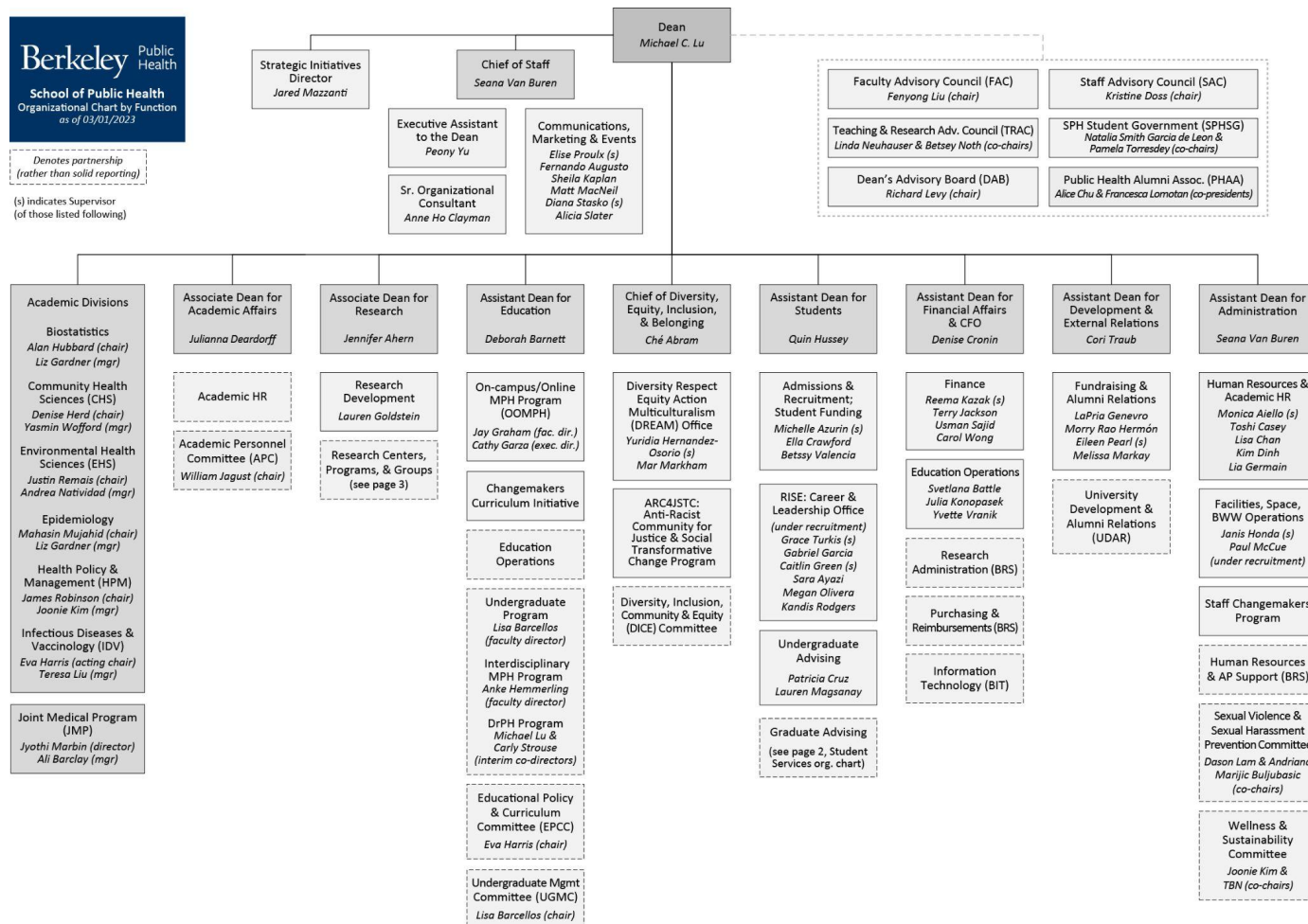
In 2010, the first MPH program in occupational and environmental health and safety ever offered in India is launched by Sri Ramachandra University in collaboration with the school and shortly thereafter, in 2011, the first-ever online degree program on the UC Berkeley campus, the Online Master of Public Health Program is established to address the growing need for educated public health leaders.

In 2022, US News and World Report ranked the UC Berkeley School of Public Health program 8th in the nation, up from the 9th spot ranking in 2019.



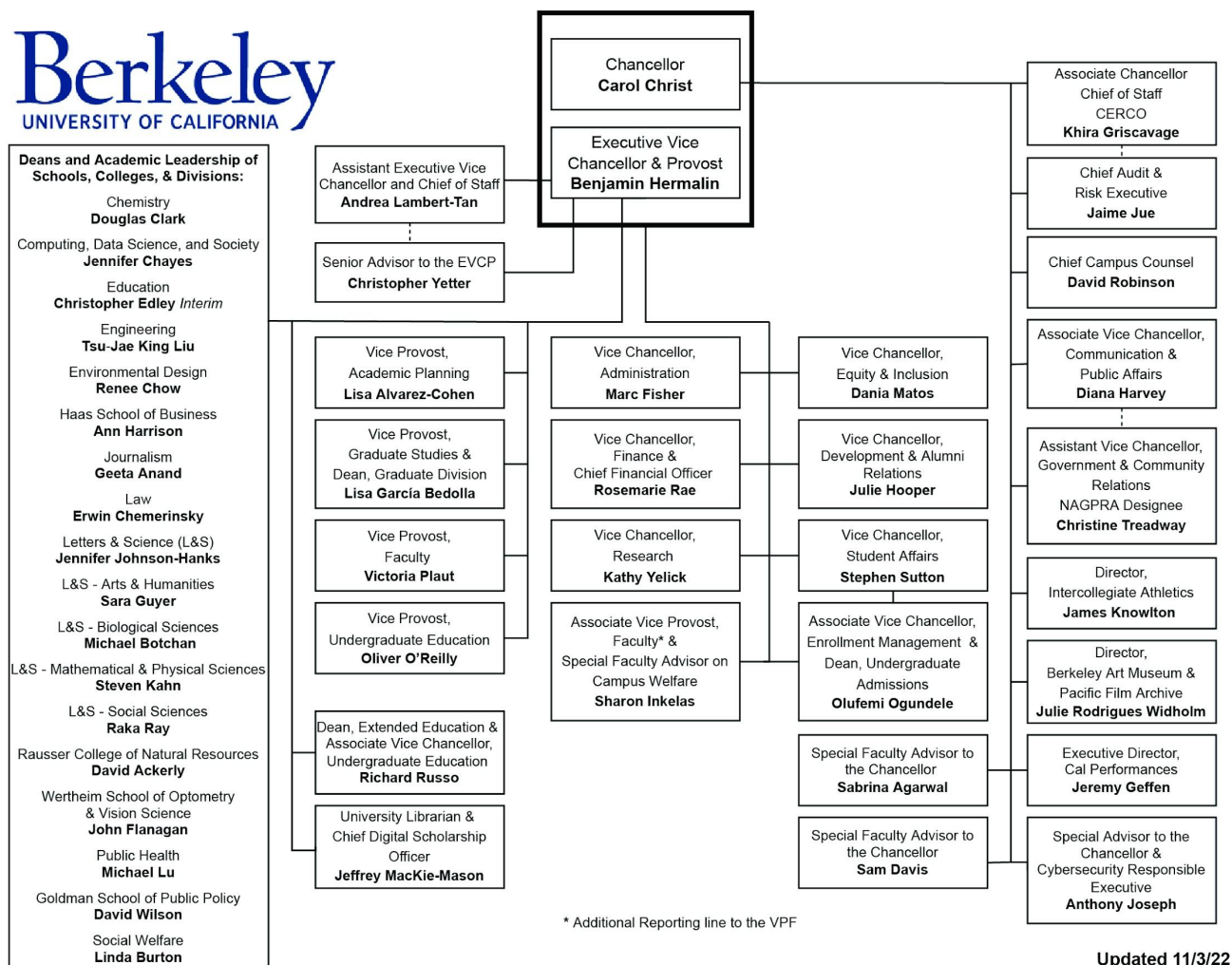
## (2) Organizational charts that clearly depict the following related to the school or program:

### a. the school or program's internal organization, including the reporting lines to the dean



The UC Berkeley School of Public Health Public Health organizational chart as of March 2023 is available in ERF Introduction 2.

**b. the relationship between the school or program and other academic units within the institution. Organizational charts may include committee structure organization and reporting lines**



The [UC Berkeley organizational chart](#) as of November 2022 is available in ERF Introduction 2.



**c. the lines of authority from the school or program's leader to the institution's chief executive officer (president, chancellor, etc.), including intermediate levels (e.g., reporting to the president through the provost)**

The [UC Berkeley organizational chart](#) as of November 2022 is included in the response to Introduction 2.b and available in ERF Introduction 2.

**d. for multi-partner schools and schools (as defined in Criterion A2), organizational charts must depict all participating institutions**

Not applicable.

**(3) An instructional matrix presenting all of the school or program's degree programs and concentrations including bachelor's, master's and doctoral degrees, as appropriate. Present data in the format of Template Intro-1.**

**Table Intro-1: Instructional Matrix - Degrees and Concentrations**

Instructional Matrix - Degrees and Concentrations					
			Categorized as public health	Campus based	Distance based
<b>Bachelor's Degrees</b>					
<i>Concentration</i>	<i>Degree</i>				
Public Health	BA		X	X	
<b>Master's Degrees</b>		<b>Academic</b>	<b>Professional</b>		
<i>Concentration</i>	<i>Degree</i>	<i>Degree</i>			
Biostatistics	MA		X	X	
Environmental Health Sciences	MS	MPH	X	X	
Epidemiology	MS	MPH	X	X	
Epidemiology/Biostatistics		MPH	X	X	X
Global Health & Environment	MS	MPH	X	X	
Health & Social Behavior		MPH	X	X	
Health Policy & Management		MPH	X	X	X
Infectious Diseases & Vaccinology		MPH	X	X	
Interdisciplinary		MPH	X	X	X
Maternal Child & Adolescent Health		MPH	X	X	
Public Health Nutrition		MPH	X	X	X
<b>Doctoral Degrees</b>		<b>Academic</b>	<b>Professional</b>		
<i>Concentration</i>	<i>Degree</i>	<i>Degree</i>			
Public Health		DrPH	X	X	
Biostatistics	PhD		X	X	
Environmental Health Sciences	PhD		X	X	
Epidemiology	PhD		X	X	
Health Policy: Health Economics	PhD		X	X	
Health Policy: Organizations and Management	PhD		X	X	

Instructional Matrix - Degrees and Concentrations					
			Categorized as public health	Campus based	Distance based
Health Policy: Population and Data Science*		PhD		X	
Infectious Diseases & Immunity		PhD		X	
<b>Joint Degrees (Dual, Combined, Concurrent, Accelerated Degrees)</b>		<b>Academic</b>	<b>Professional</b>		
<b>2nd Degree Area</b>	<b>Public Health Concentration</b>				
<i>Degree area earned in conjunction</i>	<i>Existing or joint-specific</i>	<i>Degrees</i>	<i>Degrees</i>		
Medical Doctorate (MD)	Health and Medical Sciences	MS-MD		X	MS
Master of Business Administration (MBA)	HPM		MBA-MPH	X	MPH
Master of Public Policy (MPP)	HPM		MPP-MPH	X	MPH
Master of City Planning (MCP)	HSB, EHS		MCP-MPH	X	MPH
Master of Journalism (MJ)	HSB, EHS, IDV, Epi/Bio		MJ-MPH	X	MPH
Master of Social Welfare (MSW)	HSB, MCAH		MSW-MPH	X	MPH

\*The concentration Health Policy: Population Health Sciences was renamed Health Policy: Population and Data Science in summer 2020.

- (4) Enrollment data for all of the school or program's degree programs, including bachelor's, master's and doctoral degrees, in the format of Template Intro-2. Schools that house "other" degrees and concentrations (as defined in Criterion D18) should separate those degrees and concentrations from the public health degrees for reporting student enrollments.

Enrollment of new and continuing students by degree and area of concentration are reported in the following template by **headcount**.

**Table Intro-2: Enrollment by Degree**

Degree		Current Enrollment
Master's		702
	<b>MPH</b>	<b>598</b>
	4+1 Epidemiology/Biostatistics	10
	4+1 Public Health Nutrition	3
	Environmental Health Sciences (2yr)	25
	Epidemiology (11m)	9
	Epidemiology/Biostatistics (2yr)	40
	Epidemiology/Biostatistics (online)	87
	Global Health & Environment (2yr)	23
	Health & Social Behavior (2yr)	37
	Health Policy & Management (11m)	4

Degree		Current Enrollment
	Health Policy & Management (2yr)	31
	Health Policy & Management (online)	75
	Infectious Diseases & Vaccinology (2 yr)	45
	Interdisciplinary (11m)	20
	Interdisciplinary (online)	129
	Maternal Child & Adolescent Health (11m)	3
	Maternal Child & Adolescent Health (2yr)	21
	Public Health Nutrition (11m)	1
	Public Health Nutrition (2yr)	25
	Public Health Nutrition (online)	10
	<b>MPH Concurrent* and Joint Degrees</b>	<b>80</b>
	MPH-MBA CDP Health Policy & Management	29
	MPH-MCP CDP Environmental Health Sciences	1
	MPH-MCP CDP Global Health & Environment	2
	MPH-MCP CDP Health & Social Behavior	6
	MPH-MPP CDP Health Policy & Management	1
	MPH-MSW CDP Health & Social Behavior	6
	MPH-MSW CDP Maternal Child & Adolescent Health	2
	MS-MD UC Berkeley - UCSF Joint Medical Program	33
	<b>Academic Public Health Master's</b>	<b>24</b>
	Biostatistics MA	17
	Environ Health Sciences MS	5
	Epidemiology MS	2
Doctoral		154
	<b>DrPH - Public Health DPH</b>	<b>42</b>
	<b>Academic Public Health Doctoral</b>	<b>112</b>
	Biostatistics PhD	29
	Environmental Health Sciences PhD	16
	Epidemiology PhD	31
	Health Policy PhD: Health Economics	6
	Health Policy PhD: Organizations and Management	7
	Health Policy PhD: Population and Data Science	8
	Infectious Diseases & Immunity PhD	15
Bachelor's		406
	<b>BA in public health</b>	<b>406</b>

\*Students in the MPH concurrent degree programs select an area of concentration within UC Berkeley School of Public Health.



---

## A1. Organization and Administrative Processes

---

**The school or program demonstrates effective administrative processes that are sufficient to affirm its ability to fulfill its mission and goals and to conform to the conditions for accreditation.**

**The school or program establishes appropriate decision-making structures for all significant functions and designates appropriate committees or individuals for decision making and implementation.**

**The school or program ensures that faculty (including full-time and part-time faculty) regularly interact with their colleagues and are engaged in ways that benefit the instructional program (e.g., participating in instructional workshops, engaging in program- or school-specific curriculum development and oversight).**

- (1) List the school's standing and significant ad hoc committees. For each, indicate the formula for membership (eg, two appointed faculty members from each concentration) and list the current members.**

### **Faculty Council**

- **Charge:** The Faculty Council (FAC) is the executive body of the UC Berkeley School of Public Health faculty. The FAC considers matters of general concern to the faculty (senate and non-senate faculty) and makes decisions with respect to matters delegated to it by school faculty. With the exception of personnel matters, FAC will discuss, deliberate, and make final decisions by simple majority vote after consultation with the senate and non-senate faculty in divisional and general faculty meetings, and pursuant to an advisory vote, where appropriate. The FAC receives reports from the standing committees of the faculty and either recommends action to the dean or takes final action by simple majority vote.
- **Membership:** The following are voting members of the Faculty Council: six at-large members elected by the Senate Faculty, one representing each division (with the chair and vice-chair being included among these six voting members). All voting members must be senate faculty. Representatives of the Joint Medical Program (JMP), Teaching Research Advisory Committee (TRAC), Staff Advisory Committee (SAC), as well as three students (representing the master's, doctoral, and undergraduate programs) are non-voting members of the FAC. Graduate student representatives are appointed to the FAC by the school's student government officers. The undergraduate student representative is selected by the undergraduate student affairs officer. All elected/appointed non-voting members may provide an advisory vote. At-large members are elected to two-year terms. Student and TRAC representatives are elected to one-year terms. Ex-officio non-voting members include: the dean; executive associate dean; associate dean for research; assistant dean of student services; chief of diversity, equity, inclusion, and belonging (or equity advisor); head mentor; chair of the Academic Personnel Committee (APC); chair of the Educational Policy and Curriculum Committee (EPCC); and chair of the Undergraduate Management Committee (UGMC).
- **List of 2022-2023 Members:**
  - Fenyong Liu, chair, Infectious Diseases and Vaccinology
  - Ndola Prata, vice-chair, Community Health Sciences
  - Josh Apte, Environmental Health Sciences
  - Will Dow, Health Policy and Management
  - Lexin Li, Biostatistics
  - Mahasin Mujahid, Epidemiology
  - Jyothi Marbin, Joint Medical Program
  - Ex-officio (non-voting): Michael C. Lu, dean; Julianna Deardorff, associate dean for faculty affairs; Jennifer Ahern, associate dean for research; Seana Van Buren, assistant

dean for administration; Quin Hussey, assistant dean for students; Deborah Barnett, assistant dean for education; Denise Cronin, chief financial officer; Ché Abram, chief of diversity, equity, inclusion and belonging; William Jagust, chair, Academic Personnel Committee; Eva Harris, chair, EPCC; Lisa Barcellos, chair, UGMC; SAC representative TBD.

### **Educational Policy and Curriculum Committee (EPCC)**

- **Charge:**
  - Monitors and evaluates the professional degrees at the UC Berkeley School of Public Health,
  - Recommends policy, criteria, and procedures for MPH, DrPH, and joint/concurrent degrees,
  - Recommends academic prerequisites for entry into degree programs schoolwide,
  - Monitors the curriculum for degree programs schoolwide,
  - Reviews and recommends revisions to the undergraduate, PhD, MPH, and DrPH curricula and core courses,
  - Approves or disapproves proposed new courses or modifications to existing courses,
  - Submits approved new courses to Senate Committee on Courses of Instruction (COCI),
  - Makes recommendations regarding allocation of educational resources,
  - Includes the Undergraduate Management Committee as subcommittee,
  - Includes the Online Education Faculty Steering Committee as subcommittee,
  - Recommends to the Faculty Council changes in educational policy, changes in the structure of school wide degrees, and in the content of core courses for ratification by the school faculty, and
  - A regular report to the Faculty Council will be provided by the EPCC chair.
- **Membership:** The committee will include the program heads from each master's and doctoral program, and the chair of the Undergraduate Management Committee, or their designee (e.g., a single member may represent and vote on behalf of multiple programs in a division). Five student members will also be appointed to the committee from: undergraduate (one), MPH (two), PhD (one), and DrPH (one) programs. The dean, associate dean for academic affairs, other associate and assistant deans, and FAC Chair are ex officio, non-voting members. Non-School of Public Health faculty members from joint or concurrent degree programs are non-voting members and invited on a regular basis at the discretion of the EPCC chair. An EPCC chair serves a one-year term. An EPCC vice-chair also serves a term of one academic year, and will transition into the EPCC chair position when that one-year term is concluded.
- **List of 2022-2023 Members:**
  - Eva Harris, Infectious Diseases and Vaccinology PhD, co-chair
  - Deborah Barnett, assistant dean for education, co-chair
  - Denise Herd, Health and Social Behavior MPH
  - Jyothi Marbin, Joint Medical Program (MS, PBL, Assessment, Clinical)
  - Art Reingold, Epidemiology MPH/MS/PhD
  - Mahasin Mujahid, Epidemiology/Biostatistics MPH
  - Jay Graham, Environmental Health Sciences MS/PhD/MPH

- Kimberly MacPherson, Health Policy and Management MPH
- William Dow, Health Policy and Management PhD
- Mi-Suk Kang Dufour, Biostatistics MA/PhD
- Anke Hemmerling, Interdisciplinary MPH
- John Colford, Online Master of Public Health Program
- Lisa Barcellos, Undergraduate Major
- Jennifer Lachance, Interdisciplinary DrPH
- Ex-officio (non-voting): Michael C. Lu, dean; Julianna Deardorff, associate dean for faculty affairs; Deborah Barnett, chief of curriculum and instruction; Quin Hussey, assistant dean for students; and Denise Cronin, chief financial officer

#### **Undergraduate Management Committee (subcommittee of EPCC)**

- **Charge:**
  - Recommends policy, criteria, and procedures for undergraduate public health program, and
  - Periodically reviews and recommends program revisions and sets academic prerequisites for entry into the program (public health major).
- **Membership:** The committee will include faculty instructor representatives for each undergraduate public health major core course, or their designees, as voting members. The chair will be a faculty instructor for one of the undergraduate public health major core courses and/or the faculty program director of the undergraduate program. One undergraduate student member will be appointed to the committee. Representatives from the College of Letters and Sciences are ex officio, non-voting members. The dean, associate and assistant deans are ex officio, non-voting members.
- **List of 2022-2023 Members:**
  - Lisa Barcellos, chair, Epidemiology
  - Lauren Magsanay, Undergraduate Program
  - Patricia Cruz, Undergraduate Program
  - Cathy Kodama, University Health Services
  - Ajay Pillariseti, Environmental Health Sciences
  - TBD, Community Health Sciences
  - Mi-Suk Kang-Dufour, Biostatistics
  - Robin Flagg, Health Policy and Management
  - Timothy Brown, Health Policy and Management
  - Ex-officio (non-voting): Michael C. Lu, dean; Julianna Deardorff, associate dean for faculty affairs; Deborah Barnett, assistant dean for education; and Quin Hussey, assistant dean for students

### **Online Education Committee (subcommittee of EPCC)**

- **Charge:**
  - Recommends academic policies for online education for all programs and courses offered by the school,
  - Sets curricular priorities for the Online Master of Public Health program, including but not limited to review of proposals for new concentrations and courses presented to EPCC for approval,
  - Review FTE faculty involvement in the Online Master program and provide oversight for lecturer hiring and review, and
  - Participates in preparation of reports to campus on progress in the Online Master program
- **Membership:** The committee will include senate faculty online instructors from each division (or their designees) and the Online Master program faculty leads for each concentration as voting members. The Online Master Program faculty director will serve as chair. One student member will be appointed to the committee. The director of the Online Master program, the dean, and associate and assistant Deans are ex officio, non-voting members.
- **List of 2022-2023 Members:**
  - John Colford, chair, Epidemiology
  - William Dow, Health Policy and Management
  - TBD, Infectious Diseases and Vaccinology
  - Alan Hubbard, Biostatistics
  - Jodi Halpern, Community Health Sciences
  - Sandra McCoy, Epidemiology
  - Kimberly MacPherson, Health Policy and Management
  - Jay Graham, Environmental Health Sciences
  - Ex-officio (non-voting): Michael C. Lu, dean; Deborah Barnett, assistant dean for education; Denise Cronin, chief financial officer; Lucas Carlton, Online Master of Public Health program; Kristine Doss, Online Master of Public Health program; Judy Smithson, Online Master of Public Health program; and Evan vanDommelen-Gonzalez, Online Master of Public Health program

### **Academic Personnel Committee**

- **Charge:**
  - Reviews, monitors, and develops academic personnel policies, as necessary,
  - Provides advice to the dean regarding academic personnel issues,
  - Provides advice to the dean regarding specific academic personnel actions upon request,
  - Provides advice to the dean regarding appointment of ad hoc committees for faculty advancements and search committees upon request,
  - Provides advice on equity and inclusion issues related to academic personnel as needed,
  - Assesses and reports annually on faculty salaries by gender and race/ethnicity, and
  - Provides a regular report to the Faculty Council

- **Membership:** The committee will include one full ladder-rank professor from each division and additional Senate Faculty members, as needed. The committee membership should reflect the academic diversity of the school. The chair will be a full professor and a vice-chair will be appointed from within the committee. Committee members should serve at least two years and rotate off on a staggered schedule.
- **List of 2022-2023 Members:**
  - William Jagust, chair, Community Health Sciences
  - Emily Ozer, vice-chair, Community Health Sciences
  - Justin Remais, Environmental Health Sciences
  - William Dow, Health Policy and Management
  - Mark van der Laan, Biostatistics
  - Arthur Reingold, Epidemiology
  - Fenyong Liu, Infectious Diseases and Vaccinology
  - Ex-officio (non-voting): Julianna Deardorff, associate dean for faculty affairs

#### **Student Affairs Committee (COSA)**

The full committee or a subcommittee will be appointed and convened at the direction of the Faculty Council only on an as-needed basis.

- **Charge:**
  - Advises Student Services, including admissions, advising, counseling, and other student support services,
  - Advises program faculty representatives during MPH and DrPH admissions, e.g., on policy to emphasize consideration of under-represented minorities (URMs), in consultation with the DREAM ((Diversity Respect Equity Action Multiculturalism) Office and DICE (Diversity, Inclusion, Community, and Equity) committee,
  - Reviews as needed undergraduate, master's, and doctoral admissions that represent exceptions to general policy,
  - Recommends policy, criteria, and procedures by which undergraduate, master's, and doctoral students are recommended for available honors, scholarships, and awards,
  - Recommends policy for overall allocation of all scholarship funds controlled by the school,
  - Recommends policy and procedures by which MPH or DrPH students are placed on probation and/or are dismissed, and
  - Assumes an ombudsperson function for all School of Public Health students (undergraduate, master's, and doctoral), faculty, and staff. It should ensure that appropriate grievance mechanisms exist and are available to the student body as well as to staff and faculty dealing with student conduct issues.
- **Membership:** If matters arise that require a vote, then the full committee will be appointed to consist of: a faculty member from each division (or their designees) and at least two faculty members representing the interdisciplinary programs. Three student members will also be appointed to the committee from the undergraduate (one), MPH (one), and DrPH (one) programs. The dean, FAC chair, associate deans, and assistant deans are ex officio, non-voting members.



**(2) Briefly describe which committee(s) or other responsible parties make decisions on each of the following areas and how the decisions are made:**

**a. degree requirements**

On campus, the Academic Senate exercises its responsibility for degrees and curricula through the Graduate Council (GC). The Graduate Council is a committee of the Academic Senate and currently includes one faculty member from UC Berkeley School of Public Health. The functions and membership of the Graduate Council are defined by statewide Academic Senate Bylaw 330 and Berkeley Division Bylaw 37. Three student members are appointed in accordance with Berkeley Division Bylaw 13. Public Health faculty participate in the campus bodies that establish and review academic standards and policies. The Graduate Council reviews new degree programs proposed by departments or schools and colleges without departments and forwards approved programs to the UC Regents for final action. Further, the council conducts periodic program reviews of Berkeley departments and academic programs.

At the school of public health, new program proposals or proposed changes to a program must first be reviewed and approved by the school's Education Policy and Curriculum Committee (EPCC), which has faculty and student representatives. EPCC monitors and evaluates the professional degrees in the School of Public Health as well as recommends policy, criteria, and procedures for MPH, DrPH, and joint/concurrent degrees. Two subcommittees, the Undergraduate Management Committee (UGMC) and the Online Education Faculty Steering Committee specifically review the undergraduate and online programs, respectively.

**b. curriculum design**

On campus, the Academic Senate exercises its responsibility for curricula through the Campus Committee on Curriculum and Instruction (COCI) which reviews and approves new courses and modification of existing courses and considers requests for variances in course and graduation requirements. COCI meets as a full committee biweekly and the discipline subcommittees meet for an hour in the weeks during which the full committee meetings are scheduled. Course proposals originate in schools/departments, but must meet the standards set by COCI and be approved by that faculty/student body to be offered.

School of Public Health faculty participate in the administration of the department through the duties, powers, and privileges of the Academic Senate per Standing Order 105.2 of the Regents of the University of California, Legislative Ruling (LR) 4.84, and Berkeley Division Bylaw 60. Those duties, powers, and privileges include authority and supervision over courses and curriculum. Course requests must first be approved by the school's Education Policy and Curriculum Committee (EPCC), which has faculty and student representatives. The EPCC also reviews the total body of courses taught in the school, looking for both gaps and redundancies.

**c. student assessment policies and processes**

The school's Education Policy and Curriculum Committee (EPCC) recommends policy, criteria, and procedures for student assessment in accordance with campus Graduate Council policies and CEPH guidelines. Divisions and programs also have policies and processes for student assessment. Faculty determine student assessment methods and create grading rubrics for their courses, and review course evaluations and student outcomes with their division head and/or program head and other division/program faculty to help inform changes and improvements to processes. Assessment information is communicated to students through student handbooks and syllabi.

#### **d. admissions policies and/or decisions**

##### Graduate Programs

The Graduate Council also develops through its administrative agency the Graduate Division, policies and standards for admissions. The Graduate Division oversees the admissions process. The school selects its students (both professional and academic) and recommends their admission to the Graduate Division. The Graduate Division has the final authority to offer admission and does so if the recommendation meets established standards. School of Public Health faculty determine the conditions for recommending admission to the Graduate Division. The FAC receives reports from the standing committees of the faculty (see below) and either recommends action to the dean or takes final action by simple majority vote, as stipulated in these bylaws.

The FAC receives recommendations related to admissions from two standing committees, EPCC and the Student Affairs Committee (COSA). At the direction of the Faculty Council, COSA advises EPCC and Student Services on MPH and DrPH admissions and reviews as needed undergraduate, master's, and doctoral admissions that represent exceptions to general policy. The full committee or a subcommittee will be appointed and convened at the direction of the Faculty Council only on an as-needed basis. COSA works closely with the DREAM (Diversity Respect Equity Action Multiculturalism) office and DICE (Diversity, Inclusion, Community and Equity).

Within the School of Public Health, student recruitment, admission, and award of degrees are principally faculty responsibilities. Each academic group has its own faculty admissions committee and a set of standards explicit to the degree. Specific information regarding admissions for each academic group may be found on the school's website.

The Student Services unit within the school conducts recruitment efforts. However, faculty may hold pre-application interviews and develop the narratives describing their areas of concentration. The Student Services unit receives applications, assembles electronic files, and assesses admissibility on the basis of Graduate Division standards. Admission reviews and decisions are the responsibility of the faculty admission committees for each program; student membership is encouraged on those committees. The committees oversee admissions decisions made in the areas of concentration and redirects applicants for alternative review by other concentrations as appropriate. Faculty leadership for each program will approve/disapprove requests for exceptions at the program level. The committees provide their recommendations for admission and exception requests to the Student Services unit which submits the information for final review and approval by the Graduate Division.

##### Undergraduate Program

General admissions into UC Berkeley is done by the Office of Undergraduate Admissions. Students admitted will become undeclared students in the College of Letters and Sciences if they have listed Public Health as their intended major. If they plan to change their major to Public Health from another major, they will still follow the same application process as the undeclared students. The Public Health undergraduate program comanagers and academic advisors will oversee the initial screening of the Public Health application but will not participate in reviewing applicants.

The Public Health Undergraduate Management Committee (UGMC) oversees the admissions process and policies for current UC Berkeley students pursuing a bachelor of arts degree in Public Health. UGMC consists of faculty and student services staff.

Each application cycle consists of a review by a committee of faculty and staff. Although academic performance is important, a student's ability to articulate their passion for public health is equally as important. Students submit a statement of purpose, personal history statement, resume, unofficial transcripts, and a prerequisite GPA calculation form.

If a student has a prerequisite GPA of 2.75 or lower, they are asked to explain why they have been experiencing academic difficulties in their personal history statement. These students will be

pre-screened to ensure minimum requirements would be met to succeed in our courses. Upon approval of the initial screening, these students will be considered along with the remaining applicants.

The number of students accepted into the major is dependent upon the number of seats available. The major is allocated 440 seats. If the total number of applicants (including those who passed the initial screening because of low GPA) would keep the total class size below 440, all eligible students will be admitted. If not, there will be a review of all students. A review will include looking at academics (grades and course load), leadership, work/volunteer experience, and essays.

The committee evaluates applications based on the following three criteria:

1. Review of the student's academic preparation (prerequisite coursework and GPA),
2. Personal, professional and volunteer experiences, especially those regarding the decision to pursue public health,
3. Future leadership potential in public health.

#### **e. faculty recruitment and promotion**

Faculty recruitment, retention, promotion, and tenure procedures rely on well-established school and campus mechanisms involving both Academic Senate faculty and administration. As mandated by the university's governing body, the Board of Regents, the faculty is empowered to determine academic policy; set conditions for admission and the granting of degrees; authorize and supervise courses and curricula; and advise the administration on faculty appointments, promotions, and budgets. This delegated authority makes the UC Academic Senate unique among faculty governments.

Academic Senate appointments belong to faculty who hold the titles of professor, associate professor, or assistant Professor. Specific series include ladder rank, in residence, and Clinical X. Faculty recruitment, retention, promotion, and tenure procedures all involve faculty vote. Voting faculty must be regular members of the Academic Senate, professor in the graduate school, or a recalled professor. Emeriti and non-senate faculty cannot vote on any Academic Senate personnel decision.

**Faculty Recruitment:** Approval for a new faculty position is determined through the multiyear faculty recruitment strategic plan and the annual academic faculty recruitment plan. On the UC Berkeley campus there is an overlap between academic planning and budgeting. The campus requires that requests for funding for new primary faculty be approved by the Budget Committee of the Academic Senate, in addition to the EVCP. The Budget Committee membership includes senate faculty from various schools and colleges across campus. The School of Public Health must have approval from the Budget Committee of the Academic Senate and the EVCP before beginning a recruitment process for an academic faculty position.

The School's five-year academic faculty recruitment plan helps guide the annual academic faculty recruitment plan, along with discussions and an agreement within the school as to what the priorities are for each division. Each year, as part of the annual budget process, campus has a call for faculty position requests, and each academic unit develops a detailed written request that is based on the five-year plan. Campus reviews this request and approves or denies each position. This process is led by the Dean's Office, with input from each division and the faculty at-large. Once decided, the request goes to the campus during the annual budget process for approval of the new faculty positions. The school cannot initiate faculty recruitments without campus approval.

If approval for a new faculty position is given, a search committee is formed within the school and a search is started. The Office of Faculty Equity and Welfare (OFEW) developed a [Senate Search Guide](#), which provides policy information and procedures for faculty to conduct successful, equitable searches for senate faculty. When a proposed candidate has been identified, the search committee prepares a written report, the Search Committee Narrative, documenting the search process and the candidate(s) considered for the position. The report must include an introduction,

overview of the evaluation process, brief narrative description of the finalists, and academic qualifications of the finalist (and alternate/s).

Upon receipt of the search committee report, the dean will call a meeting of the appropriate voting faculty to discuss the report. In the case of a recommended appointment, an electronic ballot will be distributed to the voting faculty via SurveyMonkey. If the school recommendation is for appointment, the dean submits the case to the campus for approval with a careful summary of the faculty discussion and his/her own departmental recommendation. The campus has final approval for the appointment.

**Threshold cases (mid-career appraisal, final appraisal/promotion to tenure, promotion to professor, advancement to professor step VI, and advancement to professor above scale):**

Faculty members will be notified by Academic Personnel when they are eligible for a threshold case. The candidate will upload the necessary materials into the AP Bears system. The Academic Personnel Committee appoints a two-person school ad hoc committee, if applicable, to provide a detailed evaluation of the case. The membership of the ad hoc committee remains confidential. External letters of evaluation, if applicable, will be provided to the school ad hoc review committee upon receipt.

The school ad hoc review committee will review the materials and prepare a detailed evaluation of the candidate's research, teaching, service (university and professional), and contributions to DEIBJ (optional). In addition, the report must provide an explicit recommendation. The non-redacted report of the ad hoc review committee will be made available to the voting faculty. The redacted version will be made available to the candidate.

Upon receipt of the ad hoc report, the FAC chair will call a meeting of the appropriate voting faculty to discuss the report. After this meeting, the AP team in the Dean's Office will distribute an electronic ballot via SurveyMonkey to the voting faculty. After the faculty meeting and collection of the ballot results, the dean will submit the threshold case to the campus for approval with a careful summary of the faculty discussion and his/her own departmental recommendation. The campus has final approval for the promotion.

**Merit cases (non-threshold merits and five-year reviews):** Faculty members will be notified by the AP team in the Dean's Office when they are eligible for a merit case. Merit advancements within rank as described above do not require an ad hoc committee or a vote of the faculty. Upon receipt of the materials in AP Bears, the dean will submit the merit case to the campus for approval with his/her own departmental recommendation. The campus has final approval for the merit.

**f. research and service activities**

Research activities are pursued by individual faculty based on their interests and expertise. Many School of Public Health and campus offices engage with the research process to support faculty to pursue their interests. The associate dean for research and director of research development at the school provide resources such as individual consultations, grant-writing workshops, and grant-writing groups to support the development of research projects among the faculty. At the campus level, the Berkeley Research Development Office (BRDO) supports the development of highly complex multi-unit or multi-campus proposals. On the administrative side, Berkeley Regional Services (BRS) provides pre-award support for proposal development and coordinates with the Sponsored Projects Office (SPO) for grant proposal submission to funding agencies. BRS and Contracts and Grants Accounting (CGA) support funded research with post-award services when funding is secured. The UC Berkeley Committee for the Protection of Human Subjects and Animal Care and Use Committee review all relevant research and assure ethical standards are followed in research at UC Berkeley. All members of the UC Berkeley community who conduct research are required to complete training in ethical research practices. The School of Public Health Dean's Office manages requests for changes or upgrades to space assigned to faculty to conduct research.

Service expectations and policies are set by various standing UC Berkeley Academic Senate committees (on which School of Public Health faculty participate) and by campus administration.

Service activities are an integral part of faculty activities and play a significant role in faculty evaluations. All faculty are expected to contribute to service, although the type and amount vary with the seniority of appointment and the individual's academic track. In general, more junior faculty (assistant professors) have lower expectations for quantity of service. Membership on many school and campus committees is subject to an election process, or in some cases appointment through administrative procedures.

Service may occur at the level of service to the candidate's division, the school, the campus, the university system, or to their profession. "Local" service can include membership in important committees related to student admissions, UC Berkeley School of Public Health operations (i.e., committees described in section A.1), or the numerous campus senate committees that are crucial for shared governance of the campus and assure faculty input into decision-making. The University of California system also requires faculty input and senior faculty in particular are often part of system-wide decision making bodies. With regard to professional service, typical activities include grant review, journal article review, membership in important academic or government organizations and committees, participation in journal editorial boards, or many other national and international level forms of service. At the time of academic review, a faculty member's service is evaluated in relation to their seniority and role in the school and faculty receive feedback at multiple stages of the evaluation process about the appropriateness of their commitments.

**(3) A copy of the bylaws or other policy documents that determine the rights and obligations of administrators, faculty and students in governance of the school.**

Documents are available in ERF A1.3:

- [UC Berkeley Graduate Division Guide to Graduate Policy](#)
- Bylaws of the Faculty of the School of Public Health
- Staff Advisory Council Bylaws
- Teaching and Research Advisory Council Bylaws
- School of Public Health Student Government Bylaws

**(4) Briefly describe how faculty contribute to decision-making activities in the broader institutional setting, including a sample of faculty memberships and/or leadership positions on committees external to the unit of accreditation.**

School of Public Health faculty contribute to decision-making on the broader UC Berkeley campus through participation in campus-wide senate committees as well as non-senate campus-wide service activities. There are 28 campus-wide senate committees. The School of Public Health has generally had representation on one-third of those committees (currently 36%).

**UC Berkeley Academic Senate Committees**

- Ann Keller, Faculty Welfare (FWEL), 2022-2023
- Arthur Reingold, Privilege and Tenure Committee, 2021-2022, 2022-2023 (fall only)
- Darlene Francis, Undergraduate Council (UGC), 2022-2023
- Emily Ozer, Divisional Council (DIVCO), chair, 2021-2022
- Emily Ozer, Committee on Research (COR), 2022-2023 (fall only)
- Fenyong Liu, Committee on Undergraduate Scholarships, Honors, and Financial Aid (CUSHFA), 2021-2022



- Hector Rodriguez, Academic Preparation Education and Admissions (AEPE), 2021-2022
- Julianna Deardorff, Diversity, Equity, and Campus Climate (DECC), 2021-2022, 2022-2023
- Lia Fernald, Committee on Research (COR), chair, 2022-2023
- Lisa Barcellos, Committee on Charges, divisional council, 2021-2022
- Maya Petersen, Academic Freedom (ACFR), 2021-2022
- Patrick Bradshaw, Courses of Instruction (COCI), 2022-2023
- Rachel Morello-Frosch, Budget and Interdepartmental Relations (BIR), 2022-2023
- Stefano Bertozzi, Academic Planning and Resource Allocation (CAPRA), 2022-2023
- William Dow, Graduate Council, vice-chair, 2021-2022, 2022-2023

#### University of California Academic Senate Committees

- Darlene Francis, Educational Policy (UCEP), 2022-2023
- Emily Ozer, Assembly of the UC Academic Senate, 2021-2022
- Hector Rodriguez, Board of Admissions and Relations with Schools (BOARS), 2021-2022
- Julianna Deardorff, University Committee on Affirmative Action, Diversity, and Equity (UCAADE), 2021-2022, 2022-2023

Additional examples of faculty leadership and membership on UC Berkeley and University of California committees are provided in ERF A1.4.

#### **(5) Describe how full-time and part-time faculty regularly interact with their colleagues (self-study document) and provide documentation of recent interactions, which may include minutes, attendee lists, etc.**

Full-time and part-time faculty regularly interact with their colleagues at monthly all-faculty meetings, division faculty meetings, and school committee meetings. Events fostering faculty interaction include biweekly Berkeley Public Health Talks speaker series, teaching town halls, and faculty retreats. Social events are also organized by divisions and the school.

Documents are available in ERF A1.5:

- All-Faculty Meeting
- Faculty Council (FAC) Meeting
- Faculty Retreat**if applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

**Strengths:** The UC Berkeley School of Public Health operates on a strong model of shared governance. Faculty engagement in the governance of the school has been strong, which fosters a strong and vibrant sense of community, equity, inclusion, and belonging. Committees include representatives from each division, and faculty, staff, and student representation where appropriate. Within the school, there are regular opportunities for faculty to engage with one another and with non-faculty academics, staff, and students. Faculty are well-versed in their rights, privileges, and obligations as faculty members. School of Public Health faculty have a strong history of involvement on University of California and UC Berkeley committees.

Weaknesses/Plans for Improvement: We did not identify significant weakness for this criterion. Faculty attrition from 2013 to 2018 had put a strain on the faculty's capacity for committee service and shared governance; the tremendous faculty growth since 2019 should ameliorate this problem over time. A 2022 Service Equity Study did not identify systematic inequities in faculty service load.

---

## A2. Multi-Partner Schools and Programs

---

**The school or program has a single identified leader (dean or director) and a cohesive chain of authority for all decision making relevant to the educational program that culminates with this individual.**

**(1) Describe the major rights and responsibilities of each participating institution.**

Not applicable.

**(2) A copy of the formal written agreement that establishes the rights and obligations of the participating universities regarding the school or program's operation.**

Not applicable.

**(3) Describe the role and responsibilities of the identified leader.**

Not applicable.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Not applicable.

---

### A3. Student Engagement

---

**Students have formal methods to participate in policy making and decision making within the school or program, and the school or program engages students as members on decision-making bodies whenever appropriate.**

- (1) Describe student participation in policy making and decision making at the school or program level, including identification of all student members of school or program committees over the last three years, and student organizations involved in school or program governance. Schools should focus this discussion on students in public health degree programs.**

Students within the UC Berkeley School of Public Health are included and encouraged to be actively engaged citizens within the school community. This includes serving on committees and providing student input and perspective regarding issues related to the student experience and policies and procedures that impact students. Below are several examples of opportunities that students have to participate in policy and decision making within the School of Public Health.

Documents identifying student members of school committees are available in ERF A3.1.

#### Student Government (SPHSG)

Berkeley Public Health supports a Student Government that consists of public health graduate students and undergraduate public health majors who serve as liaisons between the larger student body and the administration. Student Government is governed by two co-leaders who are currently registered students at the UC Berkeley School of Public Health. The co-leads have equal contribution to the leadership of SPHSG. The incoming SPHSG committee members will be chosen by ballot election. Two co-leaders of the SPHSG committee will serve as the organization's signatories. This year, SPHSG consists of 21 members, including the two co-leads and 12 co-chairs of six Committees.

The Student Government provides forums for student input and serves as a communication tool between the students and administration. Student Government, in collaboration with the dean and the assistant dean for students, hosts a monthly student town hall meeting at which students receive updates from the dean and assistant dean related to student life. It is also a forum where students can speak with the dean and assistant dean about concerns or questions relevant to their education or student experience. Additionally, the Student Government hosts a variety of events throughout the year to build community. Examples of past events include: autumn celebrations and hosting coffee and bagel hours.

The Student Government has a monthly business meeting that is open to all public health students and hosts the monthly student town hall.

#### Student participation on decision making committees within the school

Additionally, student opportunities to participate in committee work are available through school, the campus, and the UC System. Within the school, the most important committee for student representation is the Faculty Council. Three students (master's, doctoral, and undergraduate) participate as members of the Faculty Council and are selected through an election process. Students also participate on other faculty governance committees including EPCC and UGMC. Students are asked to participate on important ad hoc committees and as members of faculty and administrative leadership search committees.

In addition to opportunities within the school, the UC Berkeley campus has opportunities for students to participate on committees with jurisdiction over a variety of areas including the libraries, transportation,

student fees, affirmative action, housing, student health services, and more. At the system level, students have opportunities to participate on committees that set system-wide policy. The school provides information about these opportunities and strongly encourages student participation, but does not track involvement. Over the last two years, there has been strong public health participation in the Graduate Assembly (GA). The Graduate Assembly is the official representative body of the graduate and professional students at UC Berkeley. The GA promotes a vibrant student life, and supports student activism, inclusiveness and community service. The School of Public Health traditionally has at least two students who serve as delegates to the GA.

### Student Groups

In addition to our Student Government, the School of Public Health also encourages students to participate and develop student groups. Our student groups are engaged in interests as diverse as health policy, anti-racism, and maternal, child, and adolescent health. Student groups offer public health students the opportunity to attend events, build relationships with fellow students and faculty members, and gain hands-on public health experience within the community. There are 18 active student groups, including: Alianza Latine for Public Health Action (ALPHA), APH Women's Circle, Association of Public Health Infectious Diseases Students (APHIDS), Black Advocates for Equity in Health (BAEH), and others.

### Student Anti-Racism Committee

As BPH has committed to working toward becoming a more anti-racist institution, our students have been actively engaged in Anti-Racist Community for Justice and Social Transformative Change Program (ARC4JSTC) and/or other anti-racism efforts including a group of students who have come together to advocate for anti-racism curriculum changes. These opportunities allow students an opportunity to put into practice many of the advocacy and collaboration skills that they are learning in their academic programs.

## **(2) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: The commitment to including students in all aspects of the community is a big strength of UC Berkeley School of Public Health. As a professional school, these opportunities for students to actively participate in decision-making and policy development provide students with “on the ground” experience of working within complex systems and preparing to become effective changemakers in the world. Student input is sought for most key policy discussions related to student life. An example of such advocacy was when the dean and assistant dean for students sought input about raising the professional degree supplemental tuition payment (PDST) in 2021. Student feedback and advocacy led the school to propose a freeze on PDST increases to the UC Regents in light of the financial strain that many students and their families were experiencing as a result of the COVID-19 pandemic. We were the only school in the University of California system that proposed and were granted a PDST freeze.

Challenges: We did not identify any significant weaknesses related to this criterion. Many best practices we have adopted over the past three years, including monthly town halls, an anonymous student listening box, coffee hours, and student representation on key decision-making committees in the school, have addressed many previous concerns about a lack of inclusion and transparency. They have also given students a greater voice and sense of agency in our community. We will have to continue to address issues of power, positionality, privilege, and hierarchy that can, on occasion, make it challenging for students to voice their concerns and dissents while serving on committees with faculty and staff. We have seen significant improvement in student empowerment in decision-making and policymaking as a result of our schoolwide antiracism and restorative justice training.



---

#### A4. Autonomy for Schools of Public Health

---

**A school of public health operates at the highest level of organizational status and independence available within the university context. If there are other professional schools in the same university (e.g., medicine, nursing, law, etc.), the school of public health shall have the same degree of independence accorded to those professional schools. Independence and status are viewed within the context of institutional policies, procedures, and practices.**

- (1) Briefly describe the school's reporting lines up to the institution's chief executive officer. The response may refer to the organizational chart provided in the introduction.**

The organizational chart in Introduction-2 shows the school reporting lines up to UC Berkeley's chancellor and executive vice chancellor and provost (EVCP). The dean of the School of Public Health reports directly to the EVCP, and the school operates at the highest level of organizational status and independence within UC Berkeley.

- (2) Describe the reporting lines and levels of autonomy of other professional schools located in the same institution and identify any differences between the school of public health's reporting lines/level of autonomy and those of other units.**

The organizational chart in Introduction-2 shows the reporting lines of other professional schools. All deans of professional schools at the UC Berkeley report directly to the executive vice chancellor and provost (EVCP).

- (3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Unlike other schools and programs of public health that are embedded within a medical school or college of health sciences, UC Berkeley School of Public Health operates at the highest level of organizational status and independence within UC Berkeley.

Weaknesses: None

---

## A5. Degree Offerings in Schools of Public Health

---

**A school of public health offers a professional public health master's degree (e.g., MPH) in at least three concentrations representing at least three distinct sub-disciplinary areas in public health and public health doctoral degree programs (academic or professional) in at least two concentrations representing at least two distinct sub-disciplinary areas in public health. A school may offer more degrees or concentrations at either degree level.**

- (1) Affirm that the school offers professional public health master's degree concentrations in at least three areas and public health doctoral degree programs of study in at least two areas. Template Intro-1 may be referenced for this purpose.**

As noted in Introduction-1, the school offers:

- Fourteen public health master's degree concentrations (10 MPH, three MS, and one MA concentrations),
- Eight public health doctoral degree programs of study (one DrPH and seven PhD concentrations),
- Six concurrent/joint degree programs of study (five concurrent programs with other schools within UC Berkeley and one joint program with UCSF), and
- One bachelor degree program of study (one BA concentration)

- (2) An official catalog or bulletin that lists the degrees offered by the school.**

The 2022-2023 course catalog is available through the Berkeley Academic Guide:  
[https://guide.berkeley.edu/courses/pb\\_hlth/](https://guide.berkeley.edu/courses/pb_hlth/)

This Page Intentionally Left Blank

---

## B1. Guiding Statements

---

The school defines a *vision* that describes how the community/world will be different if the school achieves its aims.

The school defines a *mission statement* that identifies what the school will accomplish operationally in its instructional, community engagement and scholarly activities. The mission may also define the school's setting or community and priority population(s).

The school defines *goals* that describe strategies to accomplish the defined mission.

The school defines a statement of *values* that informs stakeholders about its core principles, beliefs, and priorities.

### (1) The school or program's vision, mission, goals, and values.

#### **Mission**

Our mission is to improve population health, especially for the most vulnerable, through:

- Transformational research on the major public health threats and opportunities of today and tomorrow
- Preeminent education that challenges convention and develops diverse leaders who transform the health of our communities
- Radical collaborations to meet priority health needs and achieve health equity in our increasingly diverse communities

#### **Vision**

Health equity and social justice for all.

#### **Values**

##### **Health as a Right**

We believe in social justice and the basic human right to a healthy life. We strive to reduce or eliminate inequity and injustice that affects the health and dignity of all people, especially those who are most vulnerable. We live a shared commitment to equity among our faculty, students, and staff.

##### **Strength Through Diversity**

We embrace diversity in our education, research, and service. It's the right thing to do and the best strategy for successfully engaging and transforming the communities we care about. UC Berkeley's Division of Equity and Inclusion provides leadership and accountability to resolve systemic inequities for all members of UC Berkeley through engaged research, teaching, and public service, and by expanding pathways for access and success, and promoting a healthy and engaging campus climate.

##### **Think Forward**

We innovate and train our students to lead innovation. We build a culture that challenges conventional thinking, leverages technology, and builds bridges between basic research, translational research, implementation research, public policy, education, and action.

##### **Impact First**

We demonstrate our commitment to maximum population health impact by focusing our research, education, and service efforts in areas with the potential to have transformative impact on the health of populations locally and globally.

## **Principles of Community**

Our **UC Berkeley School of Public Health Principles of Community** is an aspirational statement that reflects the ideals we seek to uphold and affirms our commitment to cultivating a safe, respectful, and inclusive community. These principles affirm our values of social justice, health as a right, embracing diversity, meaningful impact, and challenging conventional thought. Through these principles, we foster our mission, which includes radical collaborations, preeminent education, and transformational research.

When we refer to **our community** in this statement, we refer to *all members* of our school community. We celebrate the fact that the UC Berkeley School of Public Health community extends beyond students, staff, academics, and faculty. Our community includes all employees, no matter their job title or the building in which they work; all of our students, no matter their program; all of our colleagues, no matter their affiliation; and all individuals with whom we work across the UC Berkeley campus. The Principles of Community statement is intended to include **all members of our community**.

We also recognize, value, and appreciate the **diversity** of our community, in which individuals have many **intersecting** identities, lived experiences, and perspectives. We embrace and celebrate our diverse backgrounds, values, and beliefs. Together, we recognize the complex and cumulative ways discrimination influences personal experiences with harm and harassment. We believe that understanding and valuing our differences and commonalities leads to an inclusive, respectful, and safe environment. We acknowledge that systemic and institutional power abuse causes harm and oppression, on top of perpetuating historical and deep-rooted injustices and biases. As a result of these prejudices, some individuals and communities are at higher risk for experiencing harm and violence. As a community, we commit to practicing anti-racism, disrupting harmful power dynamics, and engaging in active bystander intervention to uncover and dismantle these harmful practices.

The Principles of Community statement is intended to serve as the foundation from which UC Berkeley School of Public Health commits to a lifelong practice of active self-evaluation and action to shift power imbalances and foster a community free from harm and violence. Rather than an action plan, this statement is a guide for all current and future prevention activities. The following principles reflect our commitment to maintaining a climate of equity, inclusion, and belonging rooted in mutual respect. Every member of our community has a role in sustaining a safe, caring, and respectful environment in which our core values can thrive. By abiding by these Principles of Community, we are also setting an example for our colleagues, our external partners, and the communities we serve.

We expect every member of our community to acknowledge, value, and practice the following guiding principles:

**We lead by centering our UC Berkeley School of Public Health community.** We prioritize a safe and inclusive environment by centering community members' unique experiences and perspectives, during the decision-making process. This is critical to our work, education, and identity as a school.

**We value everyone in our community.** We are committed to creating a safe environment where each person can show up every day exactly as they are, and we value them as individuals and for their contributions to our community.

**We put prevention first.** As a community and a school of public health, we have a responsibility to ourselves to prevent harm, violence, and discrimination in our community while creating an environment where everyone can grow, thrive, and reach their goals.

**We are grounded in social justice.** We understand that harm, violence, and discrimination are rooted in systemic oppression. We are committed to the just treatment of everyone and dismantling oppressive structures both within BPH and within broader society, wherever and whenever possible.

**We promote safety and respect as rights.** Every person in our community deserves to feel safe and receive respect for their physical, mental, and emotional autonomy — always, in every situation.

**We practice self-care and kindness.** We foster an environment that allows everyone to identify the best ways that they can care for themselves, be kind to others, promote well-being and maintain health. We know work grounded in these practices is more sustainable, effective, and transformative.

**We are optimistic, hopeful, and committed to change.** We know that if we come together as a community every day, we can foster an environment that is free from harm and violence and promotes respect and inclusion.

### Goals

	Focus Areas		
	Research	Education	Social Impact
<b>Goals</b>	<p><b>INNOVATING:</b> To innovate solutions to four of the most pressing public health threats of our time: climate change, pandemic threats, chronic diseases, and social inequality. In the coming decade, we aspire to become the innovation hub of the world in public health.</p>	<p><b>CHANGEMAKING:</b> To prepare current and future public health workforce to change the world. COVID-19 has shown us that big changes are needed in public health, and the world. In the coming decade, we aspire to become the best school in the world for public health changemakers.</p>	<p><b>ARC-BENDING:</b> To bend the arc of the moral universe toward health equity and social justice. We believe that universities exist not only for the generation of knowledge and education of students, but the betterment of our community and the world. In the coming decade, we aspire to become the best school of public health in the world for social impact.</p>

### **(2) If applicable, a school- or program-specific strategic plan or other comparable document.**

The School's Strategic Plan can be found in ERF B1.2.

### **(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

#### Strengths

UC Berkeley School of Public Health developed updates to its strategic plan in full consultation with faculty, students, staff, alumni, employers, and Dean's Advisory Board members. Between April through October 2022, the updated strategic plan was presented and discussed at faculty, staff, student, division, and committee meetings as well as Dean's Advisory Board and alumni board meetings. An anonymous online "listening box" was created to solicit feedback and give voice to everyone in the larger School of Public Health community. Themes were identified from the feedback of various stakeholders, which led to multiple, iterative revisions and ultimately a common vision on an updated strategic plan that fully expresses the collective aspiration of our entire community.

#### Plans for Improvement

Mission, vision, and values are hollow statements if they are not put into practice, and goals and strategies are empty promises if they are not tracked and evaluated. UC Berkeley School of Public Health will need to continue to stay true to our mission, vision, and values in everything we do (from research to education to social impact), and the evaluation measures tied to the strategic plan will need to be actively tracked and reported to inform our community on our progress to achieving our goals.



---

## B2. Evaluation and Quality Improvement

---

The school or program defines and consistently implements an evaluation plan that fulfills the following functions:

- includes all measures listed in Appendix 1 in these Accreditation Criteria
- provides information that allows the school or program to determine its effectiveness in advancing its mission and goals (as defined in Criterion B1)
  - Measures must capture all aspects of the unit's mission and goals. In most cases, this will require supplementing the measures captured in Appendix 1 with additional measures that address the unit's unique context.
- defines a process to engage in regular, substantive review of evaluation findings, as well as strategic discussions about their implications
- allows the school or program to make data-driven quality improvements e.g., in curriculum, student services, advising, faculty functions, research and extramural service, and operations, as appropriate

- (1) Present an evaluation plan in the format of Template B2-1 that lists the following for each required element in Appendix 1:
- (a) the specific data source(s) for each listed element (e.g., alumni survey, student database)
  - (b) a brief summary of the method of compiling or extracting information from the data source
  - (c) the entity or entities (generally a committee or group) responsible for reviewing and discussing each element and recommending needed improvements, when applicable
  - (d) the timeline for review (e.g., monthly, at each semester's end, annually in September)

**Table B2.1.1 Evaluation Plan**

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Student enrollment	<i>Intro-2</i>					
<i>School-defined measure: Faculty hires by strategic area: climate change, pandemic outbreaks, chronic diseases, and social inequality</i>	<i>B2-1</i>	Multiyear faculty recruitment strategic plan and annual academic faculty recruitment plan.	Review: dean; voting faculty. Decision-making: UC Berkeley Academic Senate	x		
<i>School-defined measure: Faculty awards and honors</i>	<i>B2-1</i>	Associate dean of faculty coordinates award nominations; director of communication maintains list of faculty awards	Review: division chairs; APC; associate deans (faculty, research, students); Decision-making: award committees	x	x	x
<i>School-defined measure: Faculty research funding &amp; publications</i>		Contract and grant funding is accumulated in UC Berkeley's online research administration application (Phoebe); Research expense is pulled from Calanswers and reviewed at a high level on an annual basis for financial reporting and IDC return calculations; Publications: annual faculty survey	Review: associate dean for research; division chairs. Decision-making: Funding agencies and journal peer-review	x		
<i>School-defined measure: Faculty cluster hires</i>	<i>B2-1</i>	Multiyear faculty recruitment strategic plan and annual academic faculty recruitment plan.	Review: Dean; voting faculty. Decision-making UC Berkeley Academic Senate	x		

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
<i>School-defined measure: # and % of students enrolled in Changemaker courses</i>	B2-1	Course enrollment data for changemaker courses (e.g. Community Engagement, Health Policy Advocacy, Strategic Communications for PH Professionals) is sourced from Campus Solutions.	Review: Assistant Dean of Education; Decision-making: Dean; Division Chairs; EPCC		x	
<i>School-defined measure: # of students trained through OOMPH</i>	B2-1	Course enrollment reports for online courses are sourced from Campus Solutions.	Review: OOMPH director; OOMPH committee; Assistant Dean of Education; Decision-making: Dean; Division Chairs; EPCC		x	
<i>School-defined measure: # and % of faculty participating in the Anti-racist Pedagogy Faculty Leadership Academy (FLA)</i>	B2-1	FLA facilitators and program staff maintain participant lists.	Review: Academy facilitators and program staff; Decision-Making: Chief of Diversity, Equity, Inclusion, and Belonging; Associate Dean of Faculty; Assistant Dean for Students		x	
At least three specific examples of improvements undertaken in the last three years based on the evaluation plan. At least one of the changes must relate to an area other than the curriculum	B2-2					

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Graduation rates	B3-1	Graduation rates by student cohort by degree are calculated on an annual basis from completion and registration data pulled from Campus Solutions for both graduate students and undergraduate students. This data is reviewed annually by the Asst Dean of Education before submission to CEPH and ASPPH. For any degrees that do not meet minimum graduation rates, additional student specific data is gathered from program managers and discussed with the program head and the Asst Dean of Student Services.	Review: Assistant Dean of Education; Program Heads; Decision-making: Dean; division chairs		x	
Doctoral student progression (e.g., # newly admitted, # completed coursework)	B3-2	Doctoral student enrollment and progression to candidacy is tracked in Campus Solutions and completed coursework tracked by program managers.	Review: Doctoral program heads, program managers, doctoral faculty committees. Decision-making: Dean; assistant dean for education			
Post-graduation outcomes (e.g., employment, enrollment in further education)	B4-1	Student completion data is pulled from Campus Solutions and outcome data is gathered through the annual Exit survey and Alumni survey (primary sources) and several secondary sources	Review: assistant dean of education; assistant dean of students; program heads, program managers. Decision-making: dean, division chairs		x	

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Actionable data (quantitative and/or qualitative) from recent alumni on their self-assessed preparation for post-graduation destinations	B5	Data is gathered through an annual alumni survey. Data is shared broadly with program personnel and school leadership.	RISE Office; Program Heads		x	
Budget table	C1-1					
Student perceptions of faculty availability	C2; H1-H2 Data tab	Data is gathered through the annual Exit survey as well as course evaluations conducted every semester	Review: Assistant Dean of Students; Assistant Dean of Education; Associate Dean of Faculty Affairs; program heads. Decision-making: Dean; division chairs		x	

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Student perceptions of class size & relationship to learning	C2	Data is gathered through the annual Exit survey.	Review: Assistant Dean of Students; Assistant Dean of Education; Associate Dean of Faculty Affairs; program heads. Decision-making: Dean; division chairs		x	
List of all faculty, which concentrations they support & their FTE allocation to the unit as a whole	C2-1, E1-1, E1-2					
Ratios for student academic advising (all degree levels)	C2-2	Information will be collected annually through a faculty survey, and reported on an aggregate basis by each degree concentration.	Review: program heads, assistant dean for education; assistant dean for students; associate dean for faculty. Decision-making: dean; division chairs			
Ratios for supervision of MPH ILE	C2-2	Information will be collected annually through a faculty survey, and reported on an aggregate basis by each degree concentration.	Review: program heads, assistant dean for education; assistant dean for students; associate dean for faculty. Decision-making: dean; division chairs			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Ratios for supervision of bachelor's cumulative/experiential activity	C2-2	Information will be collected annually through a faculty survey, and reported on an aggregate basis by each degree concentration.	Review: program heads, assistant dean for education; assistant dean for students; associate dean for faculty. Decision-making: dean; division chairs			
Ratios for DrPH ILE advising	C2-2	Information will be collected annually through a faculty survey, and reported on an aggregate basis by each degree concentration.	Review: program heads, assistant dean for education; assistant dean for students; associate dean for faculty. Decision-making: dean; division chairs			
Ratios for PhD dissertation advising	C2-2	Information will be collected annually through a faculty survey, and reported on an aggregate basis by each degree concentration.	Review: program heads, assistant dean for education; assistant dean for students; associate dean for faculty. Decision-making: dean; division chairs			
Ratios for MS final project advising	C2-2	Information will be collected annually through a faculty survey, and reported on an aggregate basis by each degree concentration.	Review: program heads, assistant dean for education; assistant dean for students; associate dean for faculty. Decision-making: dean; division chairs			



Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Count, FTE (if applicable), and type/categories of staff resources	C3-1					
Faculty participation in activities/resources designed to improve instructional effectiveness (maintain ongoing list of exemplars)	E3	Review at annual goal setting meetings in the fall and annual teaching plan meetings in Spring.	Review: Associate dean for faculty; assistant dean for education. Decision-making: dean; division chairs			
<i>Faculty currency &amp; instructional technique measure 1: External reviews of proposed or existing courses or curricula, outside of normal university processes</i>	E3	Educational Policy and Curriculum Committee (EPCC) course proposals submitted by Program Heads and instructors at meetings during the academic year.	Review: assistant dean for education; division chairs and program heads. Decision-making: EPCC			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
<i>Faculty currency &amp; instructional technique measure 2: Student satisfaction with instructional quality</i>	E3	Data is gathered through the Instructor Effectiveness question included in the course evaluations each semester. Course evaluations are shared with individual instructors, program personnel and included in the academic review process. Course evaluations with mean or median score trends of 5 or less on a 7 point rating scale are flagged and reviewed with the Assistant Dean of Education and shared with Division Heads for action to be taken.	Review: assistant dean for education; program heads. Decision-making: dean, division chairs			
<i>Faculty currency &amp; instructional technique measure 3: Teaching assistants trained in pedagogical techniques</i>	E3	Students attest in the SPH Student Hire Eligibility Form that they meet the criteria for GSI appointment, including fulfillment of the pedagogy requirements. If necessary, verification of the student's pedagogy seminar enrollment can be done through course enrollment reports for PB HLTH 375: School of Public Health Schoolwide Pedagogy Course and other SPH divisional pedagogy courses.	Review: hiring coordinators. Decision-making: head faculty advisor for GSIs; faculty advisors for GSIs; assistant dean for education; program heads			
Faculty research/scholarly activities with connections to instruction (maintain ongoing list of exemplars)	E4	Data is from Google Scholar and reviewed every 2-3 years for each faculty as part of merit process.	Review: director of research development; associate dean for research. Decision-making: dean; division chairs			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
<i>Faculty scholarship measure 1: Percent of faculty participating in research activities</i>	E4-1	Data is from Google Scholar and reviewed every 2-3 years for each faculty as part of merit process.	Review: director of research development; associate dean for research. Decision-making: dean; division chairs	x		
<i>Faculty scholarship measure 2: Total research funding</i>	E4-1	Data is from UC Berkeley's online research administration application (Phoebe) and reviewed by the Director of Research Development annually.	Review: director of research development; associate dean for research. Decision-making: dean; division chairs			
<i>Faculty scholarship measure 3: Number of grant submissions</i>	E4-1	Data is from UC Berkeley's online research administration application (Phoebe) and reviewed by the Director of Research Development annually.	Review: director of research development; associate dean for research. Decision-making: dean; division chairs	x		
<i>Faculty scholarship measure 4: Grant success rate</i>	E4-1	Data is from UC Berkeley's online research administration application (Phoebe) and reviewed by the Director of Research Development annually.	Review: director of research development; associate dean for research. Decision-making: dean; division chairs	x		
Faculty extramural service activities with connections to instruction (maintain ongoing list of exemplars)	E5	Service is reviewed as part of the merit process, every 2-3 years for each faculty. Information will also be collected annually through a faculty survey, and reported on an aggregate basis.	Review: associate dean for faculty; executive dean for social impact (new). Decision-making: dean; division chairs			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
<i>Faculty service measure 1: Percent of faculty participating in extramural service activities</i>	E5	Service is reviewed as part of the merit process, every 2-3 years for each faculty. Information will also be collected annually through a faculty survey, and reported on an aggregate basis.	Review: associate dean for faculty; executive dean for social impact (new). Decision-making: dean; division chairs			x
<i>Faculty service measure 2: Number of community-based service projects</i>	E5	Service is reviewed as part of the merit process, every 2-3 years for each faculty. Information will also be collected annually through a faculty survey, and reported on an aggregate basis.	Review: associate dean for faculty; executive dean for social impact (new). Decision-making: dean; division chairs			x
<i>Faculty service measure 3: Number of faculty-student service collaborations</i>	E5	Service is reviewed as part of the merit process, every 2-3 years for each faculty. Information will also be collected annually through a faculty survey, and reported on an aggregate basis.	Review: associate dean for faculty; executive dean for social impact (new). Decision-making: dean; division chairs			x
Actionable data (quantitative and/or qualitative) from employers on graduates' preparation for post-graduation destinations	F1	Survey administered via Qualtrics to Career Services database of employer contacts. Responses include both quantitative and qualitative feedback. Director of Career Services and Data Analyst review and disseminate findings to stakeholder groups. The survey will be conducted on a regular basis every 2-3 years.	Review: associate dean for faculty; assistant dean for students; executive dean for social impact (new). Decision-making: dean; division chairs			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Feedback from external stakeholders on changing practice & research needs that might impact unit priorities and/or curricula	F1	Meetings with external constituents, e.g. Dean's Advisory Board, Changemakers External Task Force, PHAA Board.	Review: executive dean for social impact (new); assistant dean for education. Decision-making: Dean; EPCC; FAC			
Feedback from stakeholders on guiding statements and ongoing self-evaluation data	F1	Feedback from stakeholders is gathered at meetings where the strategic plan is presented and through listening boxes (responses submitted after the meeting to a designated email address or form).	Review: guiding statements -- all stakeholders; self-evaluation data (responsible unit; see above). Decision-making: Dean; FAC Chair and FAC			
Professional AND community service activities that students participate in (maintain ongoing list of exemplars)	F2	Participation in professional and community service activities that students participate in are tracked by specific program and RISE staff.	Review: Directors and staff of the particular program organizing the event; RISE director and staff. Decision-making: Assistant Dean for Students; executive dean for social impact			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Current educational and professional development needs of self-defined communities of public health workers (individuals not currently enrolled in unit's degree programs)	F3	RISE: BPH Careers and Leadership Office collects professional development needs annually through practicum preceptor surveys, attendance at professional conferences, and individual discussions/relationships with faculty and practitioners. Feedback informs planning of future offerings.	Review: Directors and staff in the RISE: BPH Careers and Leadership Office. Decision-making: Dean; Executive Dean for Social Impact (new); assistant dean for education			
Continuing education events presented for the external community, with number of non-student, non-faculty attendees per event (maintain ongoing list)	F3-1	Evaluations are regularly developed and administered for individual events and programs. Depending on the event/program, feedback may be gathered through surveys or other communications with participants. Relevant staff review feedback and incorporate into planning for future offerings. Programs maintain attendee lists and record of events.	Review: Directors and staff of the particular program organizing the event; director of communication. Decision-making: Dean; executive dean for social impact (future role)			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Quantitative and qualitative information that demonstrates unit's ongoing efforts to increase representation and support success of self-defined priority underserved populations—among students AND faculty (and staff if applicable)	G1	Student, faculty and staff demographic information are pulled from one of the campus's reporting systems, Calanswers. This data is self-reported during the admissions and registration process for students and during the hiring process for faculty and staff. Faculty diversity data is also provided by Office for Faculty Equity & Welfare and reviewed by BPH on an annual basis as part of the campus's faculty FTE call and reviewed as part of the annual data reporting to ASPPH. For staff recruitment, affirmative action (AA) goals are provided by People & Culture (central HR).	Review: Chief of Diversity, Equity, Inclusion, and Belonging; Associate Dean of Faculty; Assistant Dean for Students; Assistant Dean for Administration. Decision-making: Dean; division chairs			x
Student AND faculty (staff, if applicable) perceptions of unit's climate regarding diversity & cultural competence	G1	Annual school wide climate survey for all faculty, other academics, staff, and students: developed and administered by Diversity Inclusion Community Equity Committee (DICE) and Chief of Diversity, Equity, Inclusion, and Belonging; responses are both qualitative and quantitative. Results are reviewed by the DICE committee and Chief of Diversity, Equity, Inclusion, and Belonging then presented to the school wide community for addressing areas of concern.	Review: Chief of Diversity, Equity, Inclusion, and Belonging; Associate Dean of Faculty; Assistant Dean for Students; Assistant Dean for Administration, DICE Committee, ARC4JSTC. Decision-making: Dean; division chairs & managers; program heads & managers			x



Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Student satisfaction with academic advising	H1 (Data in tab H1 - H2)	Data is gathered through the annual Exit survey. Exit survey data is shared with program personnel and School leadership. Additional data is gathered through the Student Pulse Survey sent every semester in week 10 (fall and spring) which includes questions about academic advising from program and faculty advisors.	Review: Assistant Dean of Students; Assistant Dean of Education; Associate Dean for Faculty. Decision-making: Dean; division chairs; program heads			
Student satisfaction with career advising	H2 (Data in tab H1 - H2)	Annual exit survey. Staff administer survey annually in advance of May commencement; responses include both quantitative and qualitative feedback. Data analyst and additional staff review data annually.	Review: Director of Career Services; Assistant Dean of Students. Decision-making: Dean; Executive Dean for Social Impact (new)			
Events or services provided to assist with career readiness, job search, enrollment in additional education, etc. for students and alumni (maintain ongoing list of exemplars)	H2	Evaluations are regularly developed and administered for individual events and programs. Depending on the event/program, feedback is solicited via Zoom poll or external survey (e.g., Google form). Relevant staff review feedback immediately and incorporate into planning for future offerings. Staff maintain ongoing record of events/programs.	Review: Director of Career Services; Assistant Dean of Students. Decision-making: Dean; Executive Dean for Social Impact (new)			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
Number of student complaints filed (and info on disposition or progress)	H3	Notifications from students, faculty, students services staff, or UC Berkeley campus departments (e.g. Office for the Prevention of Harassment and Discrimination, Office for Faculty Equity and Welfare), and monitoring of disposition and progress by individuals with review responsibility.	Review: Chief of Diversity, Equity, Inclusion, and Belonging; Associate Dean of Faculty; Assistant Dean for Administration. Decision-making: Dean; Division Chairs; Program Heads			
<i>Recruitment &amp; admissions measure: Percentage of priority under-represented students (as defined in Criterion G1) accepting offers of graduate admission</i>	H4	CalAnswers Report (secondary source) which is based on Slate Application Data (primary source) Student admissions and yield data is collected from Slate and analyzed by analysts with the CalAnswers team every year in October. Student demographics are self-reported by the applicant when they complete the application.	Review: CalAnswers Team / Office of Planning and Analysis; director of admissions; assistant dean for students; chief of diversity, equity, inclusion, and belonging. Decision-making: Dean, division chairs; program heads			
<i>Recruitment &amp; admissions measure: Percentage of priority first-gen students accepting offers of graduate admission</i>	H4	Slate Application Data First-gen data is not collected and analyzed by the CalAnswers team, so this is completed by the Director of Admissions & Recruitment. The primary source is the same as above and is based on student self-report of their parents' level of education.	Review: CalAnswers Team / Office of Planning and Analysis; director of admissions; assistant dean for students; chief of diversity, equity, inclusion, and belonging. Decision-making: Dean, division chairs; program heads			

Measures	Criteria or Template	Data source & method of analysis	Who has review & decision-making responsibility?	Does it measure Goal 1? Research	Does it measure Goal 2? Education	Does it measure Goal 3? Social Impact
<i>Recruitment &amp; admissions measure: Percentage of priority under-represented students (as defined in Criterion G1) accepting offers of graduate admission</i>	H4	CalAnswers Report (secondary source) which is based on Slate Application Data (primary source) Student admissions and yield data is collected from Slate and analyzed by analysts with the CalAnswers team every year in October. Student demographics are self-reported by the applicant when they complete the application.	Review: CalAnswers Team / Office of Planning and Analysis; director of admissions; assistant dean for students; chief of diversity, equity, inclusion, and belonging. Decision-making: Dean, division chairs; program heads			
<i>Recruitment &amp; admissions measure: Percentage of priority first-gen students accepting offers of graduate admission</i>	H4	Slate Application Data First-gen data is not collected and analyzed by the CalAnswers team, so this is completed by the Director of Admissions & Recruitment. The primary source is the same as above and is based on student self-report of their parents' level of education.	Review: CalAnswers Team / Office of Planning and Analysis; director of admissions; assistant dean for students; chief of diversity, equity, inclusion, and belonging. Decision-making: Dean, division chairs; program heads			

- (2) Provide evidence of implementation of the plan described in Template B2-1. Evidence may include reports or data summaries prepared for review, notes from meetings at which results were discussed, etc.**

Evidence of implementation of the evaluation plan can be found in ERF B2.2.

- (3) Provide at least three specific examples of improvements undertaken in the last three years based on the evaluation plan. At least one of the changes must relate to an area other than the curriculum. See Template B2-2.**

**Table B2.3.1 Improvements Undertaken Based on the Evaluation Plan**

	Measure (copied from column 1 of Template B2-1) that informed the change	Data that indicated improvement was needed	Improvement undertaken*
Example 1	Faculty hires by strategic area: climate change, pandemic outbreaks, chronic diseases, and social inequality	Cal Answers data demonstrating net 25% attrition in ladder-rank faculty between 2013 and 2018	Developed coherent and compelling multiyear faculty recruitment strategic plan; increased trust and credibility with campus leadership and senate budget committee.
Example 2	Number of students trained through the Online MPH Program	Cal Answers data demonstrating the number of students enrolled in online courses. In AY22, the number of students in on-campus programs taking online courses increased 64% over AY20.	Implemented an advising and permission code process for students to enroll in online courses ensuring access of students to appropriate online courses; increased collaboration between on-campus and online programs around curriculum development and evaluation.
Example 3	Number and percentage of faculty participating in the Anti-racist Pedagogy Faculty Leadership Academy (FLA)	Through a series of focus groups with each faculty division, it was recognized that faculty require the skills for practicing anti-racist pedagogy inside and outside of the classroom and advancing an effective anti-racist and racial justice curriculum.	The inaugural academy in 2021 was completed by 53 participants representing both PIF and Non-PIF faculty. In 2022, the academy enrolled 42 faculty which was again a mixture of both PIF and Non-PIF.

\* At least one of the changes must relate to an area other than the curriculum

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

**Strengths:** UC Berkeley School of Public Health now has people, processes, and systems in place to collect, review, communicate, and take action on data for all evaluation measures, and to use real-time data to drive continuous quality improvement toward our research, education, and social impact goals. These evaluation measures for each goal and strategy were developed based on engagement with stakeholder groups who will be responsible for retrieving, analyzing, disseminating, or making decisions based on the data. Students are provided with the opportunity to provide feedback on curriculum, programs, issues, and needs through regular and robust data collection processes, such as course evaluations every semester, pulse surveys twice a semester, and graduating student exit surveys annually. Alumni and employer surveys will now be conducted annually to assess the adequacy of our graduates' preparation for workplace needs.

**Weaknesses:** In the recent past, the UC Berkeley School of Public Health has not consistently collected, reviewed, communicated, and taken actions on data for some evaluation measures.

**Plans for Improvement:** This self-study has spurred us to put processes and systems in place for data-driven continuous quality improvement. Going forward, we have developed mechanisms for how data will be consistently collected in a timely manner, reviewed, communicated, and acted upon. We have identified individuals or units who will be responsible for collecting, analyzing, communicating, making decisions, and taking actions based on the data. The addition of a data analyst on the education operations team in 2022 whose scope and expertise includes survey design and data reporting will help ensure consistent and timely evaluation and data-driven quality improvement.

### B3. Graduation Rates

The school or program collects and analyzes graduation rate data for each public health degree offered (e.g., BS, MPH, MS, PhD, DrPH).

The school or program achieves graduation rates of 70% or greater for bachelor's and master's degrees and 60% or greater for doctoral degrees.

(1) Graduation rate data for each public health degree in the format of Template B3-1.

Table B3.1.1 Students in MPH Degree, by Cohorts Entering Between 2017-2018 and 2021-2022

*Maximum Time to Graduate: 5 years						
	Cohort of Students	2017-18	2018-19	2019-20	2020-21	2021-22
2017-18	# Students entered	243				
	# Students withdrew, dropped, etc.	2				
	# Students graduated	30				
	Cumulative graduation rate	12%				
2018-19	# Students continuing at beginning of this school year (or # entering for newest cohort)	211	285			
	# Students withdrew, dropped, etc.	3	8			
	# Students graduated	112	39			
	Cumulative graduation rate	58%	14%			
2019-20	# Students continuing at beginning of this school year (or # entering for newest cohort)	96	238	247		
	# Students withdrew, dropped, etc.	1	13	5		
	# Students graduated	71	117	30		
	Cumulative graduation rate	88%	55%	12%		
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	24	108	212	290	
	# Students withdrew, dropped, etc.	0	5	4	7	
	# Students graduated	10	72	115	32	
	Cumulative graduation rate	92%	80%	59%	11%	
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	14	31	93	251	386
	# Students withdrew, dropped, etc.	0	0	0	0	0
	# Students graduated	5	23	72	109	33
	Cumulative graduation rate	94%	88%	88%	49%	9%

**Table B3.1.2 Students in DrPH Degree, by Cohorts Entering Between 2016-2017 and 2021-2022**

Maximum Time to Graduate: 6 years							
Entering	Cohort of Students	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
2016-17	# Students entered	6					
	# Students withdrew, dropped, etc.	0					
	# Students graduated	0					
	Cumulative graduation rate	0%					
2017-18	# Students continuing at beginning of this school year (or # entering for newest cohort)	6	5				
	# Students withdrew, dropped, etc.	0	0				
	# Students graduated	0	0				
	Cumulative graduation rate	0%	0%				
2018-19	# Students continuing at beginning of this school year (or # entering for newest cohort)	6	5	7			
	# Students withdrew, dropped, etc.	0	0	0			
	# Students graduated	0	0	0			
	Cumulative graduation rate	0%	0%	0%			
2019-20	# Students continuing at beginning of this school year (or # entering for newest cohort)	6	5	7	6		
	# Students withdrew, dropped, etc.	0	0	2	0		
	# Students graduated	1	1	0	0		
	Cumulative graduation rate	17%	20%	0%	0%		
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	5	4	5	6	9	
	# Students withdrew, dropped, etc.	0	0	0	0	0	
	# Students graduated	2	2	0	0	0	
	Cumulative graduation rate	50%	60%	0%	0%	0%	
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	3	2	5	6	9	14
	# Students withdrew, dropped, etc.	0	0	0	0	0	0
	# Students graduated	3	0	1	0	0	0
	Cumulative graduation rate	100%	60%	14%	0%	0%	0%



**Table B3.1.3 Students in MS Degree, by Cohorts Entering Between 2018-2019 and 2021-2022**

<b>Maximum Time to Graduate: 4 years</b>					
	<b>Cohort of Students</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
2018-19	# Students entered	19			
	# Students withdrew, dropped, etc.	1			
	# Students graduated	0			
	Cumulative graduation rate	0%			
2019-20	# Students continuing at beginning of this school year (or # entering for newest cohort)	18	19		
	# Students withdrew, dropped, etc.	0	0		
	# Students graduated	2	0		
	Cumulative graduation rate	11%	0%		
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	16	19	21	
	# Students withdrew, dropped, etc.	0	0	0	
	# Students graduated	16	3	1	
	Cumulative graduation rate	95%	16%	0%	
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	16	20	19
	# Students withdrew, dropped, etc.	0	0	0	0
	# Students graduated	0	16	3	0
	Cumulative graduation rate	95%	100%	21%	0%

**Table B3.1.4 Students in MA Degree, by Cohorts Entering Between 2018-2019 and 2021-2022**

<b>*Maximum Time to Graduate: 4 years</b>					
	<b>Cohort of Students</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
2018-19	# Students entered	9			
	# Students withdrew, dropped, etc.	0			
	# Students graduated	0			
	Cumulative graduation rate	0%			
2019-20	# Students continuing at beginning of this school year (or # entering for newest cohort)	9	10		
	# Students withdrew, dropped, etc.	0	0		
	# Students graduated	6	0		
	Cumulative graduation rate	67%	0%		
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	3	10	7	
	# Students withdrew, dropped, etc.	0	0	0	
	# Students graduated	3	6	1	
	Cumulative graduation rate	100%	60%	0%	
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	4	6	12
	# Students withdrew, dropped, etc.	0	0	0	0
	# Students graduated	0	4	5	0
	Cumulative graduation rate	100%	100%	60%	0%

**Table B3.1.5 Students in PhD Degree, by Cohorts Entering Between 2016-2017 and 2021-2022**

<b>*Maximum Time to Graduate: 6 years</b>							
<b>Entering</b>	<b>Cohort of Students</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
2016-17	# Students entered	20					
	# Students withdrew, dropped, etc.	0					
	# Students graduated	0					
	Cumulative graduation rate	0%					
2017-18	# Students continuing at beginning of this school year (or # entering for newest cohort)	20	28				
	# Students withdrew, dropped, etc.	0					
	# Students graduated	0	0				
	Cumulative graduation rate	0%	0%				
2018-19	# Students continuing at beginning of this school year (or # entering for newest cohort)	20	28	22			
	# Students withdrew, dropped, etc.	1	0	0			
	# Students graduated	0	0	0			
	Cumulative graduation rate	0%	0%	0%			
2019-20	# Students continuing at beginning of this school year (or # entering for newest cohort)	19	28	21	28		
	# Students withdrew, dropped, etc.	0	0	0	0		
	# Students graduated	5	2	0	0		
	Cumulative graduation rate	25%	7%	0%	0%		
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	14	26	21	28	26	
	# Students withdrew, dropped, etc.	2	0	1	0	1	
	# Students graduated	7	6	5	1	0	
	Cumulative graduation rate	60%	29%	23%	4%	0%	
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	5	20	15	27	26	31
	# Students withdrew, dropped, etc.	0	0	0	0	0	1
	# Students graduated	5	10	4	3	0	0
	Cumulative graduation rate	85%	64%	41%	14%	0%	0%

Notes on Table B3.1.5 Students in PhD degree

- 18-19 cohort: Includes one student who completed the program with MS degree in academic year 20-21
- 19-20 cohort: Includes one student who completed the program with MS degree in academic year 21-22

**Table B3.1.6 Students in BA Degree, by Cohorts Entering Between 2019-2020 and 2021-2022**

<b>Maximum Time to Graduate: 2 years</b>				
	<b>Cohort of Students</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>
Spring 2020 - Fall 2020	# Students entered	226		
	# Students withdrew, dropped, etc.	2		
	# Students graduated	5		
	Cumulative graduation rate	2%		
Spring 2021 - Fall 2021	# Students continuing at beginning of this school year (or # entering for newest cohort)	219	215	
	# Students withdrew, dropped, etc.	6	7	
	# Students graduated	85	5	
	Cumulative graduation rate	40%	2%	
Spring 2022 - Summer 2022	# Students continuing at beginning of this school year (or # entering for newest cohort)	128	203	92
	# Students withdrew, dropped, etc.	0	3	0
	# Students graduated	121	61	2
	Cumulative graduation rate	93%	31%	2%

**Notes on Table B3.1.6 Students in BA degree**

Students normally enroll in their Public Health major coursework a term after they declare the major as captured in our internal reporting system (Campus Solutions). For example, students who declared in fall 2019 would have started Public Health coursework in spring 2020. For purposes of this template, the first cohort tracked are those students who first enrolled in the BA Public Health major and started coursework in the spring, summer or fall of 2020. The graduation rates in this template reflect that we are allowing all students at least two full academic years (four terms) from their first semester of enrollment to graduate.

**(2) Data on public health doctoral student progression in the format of Template B3-2.****Table B3.2.1 Doctoral Student Data for Year 2022 (Academic Year 2022-23)**

	PhD Biostats	PhD Epi	PhD EHS	PhD Health Policy: Health Economics	PhD Health Policy: Orgs and Mgmt	PhD Health Policy: Population and Data Science	PhD IDI	DrPH
# newly admitted in 2022*	3	3	6	2	1	1	5	12
# currently enrolled (total) in 2022*	31	37	19	6	7	8	16	46
# completed coursework during 2021**	30	42	4	3	1	1	9	10
# in candidacy status (cumulative) during 2021**	19	25	5	6	4	3	11	10
# graduated in 2021	6	12	0	3	1	1	4	4

\*Refers to fall 2022 new enrollments

\*\* Refers to AY 2021-2022 with advancement dates up to and including May 2022

**(3) Explain the data presented above, including identification of factors contributing to any rates that do not meet this criterion's expectations and plans to address these factors.**

The school consistently achieves graduation rates above CEPH established levels. Our graduation rates of 94%, 95%, 100%, and 93% for MPH, MS, MA, and BA students, respectively, far exceed the 70% bar set by CEPH for master's and bachelor's degree students, and our graduation rates of 85% and 100% for PhD and DrPH students, respectively, far exceeds the bar of 60% set for doctoral degree students. As shown above in B3.1, graduation rates for the AY 2021-2022 for the school followed this same pattern.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Overall, the school is able to provide the level of support needed for students to be able to meet the challenges posed by a very rigorous curriculum and graduate within the maximum time allowed for their degree.

## B4. Post-Graduation Outcomes

The school or program collects and analyzes data on graduates' employment or enrollment in further education post-graduation, for each public health degree offered (e.g., BS, MPH, MS, PhD, DrPH).

The school or program achieves rates of 80% or greater employment or enrollment in further education within the defined time period for each degree.

- (1) Data on post-graduation outcomes (employment or enrollment in further education) for each public health degree in the format of Template B4-1.

**Table B4.1.1 Post-Graduation Outcomes - BA**

Post-Graduation Outcomes - BA	2020 Number & percentage	2021 Number & percentage	2022 Number & percentage
Employed	77 (42%)	93 (41%)	95 (43%)
Continuing education/training (not employed)	83 (45%)	86 (38%)	89 (40%)
Not seeking employment or not seeking additional education by choice	4 (2%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	7 (4%)	0 (0%)	0 (0%)
Unknown	13 (7%)	49 (21%)	38 (17%)
<b>Total graduates (known + unknown)</b>	<b>184</b>	<b>228</b>	<b>222</b>

**Table B4.1.2 Post-Graduation Outcomes - MA**

Post-Graduation Outcomes - MA	2020 Number & percentage	2021 Number & percentage	2022 Number & percentage
Employed	2 (29.%)	3 (43%)	8 (67%)
Continuing education/training (not employed)	5 (71%)	4 (57%)	4 (33%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	0 (0%)	0 (0%)	0 (0%)
Unknown	0 (0%)	0 (0%)	0 (0%)
<b>Total graduates (known + unknown)</b>	<b>7</b>	<b>7</b>	<b>12</b>

**Table B4.1.3 Post-Graduation Outcomes - MS**

Post-Graduation Outcomes - MS	2020 Number & percentage	2021 Number & percentage	2022 Number & percentage
Employed	0 (0%)	0 (0%)	5 (21%)
Continuing education/training (not employed)	21 (100%)	19 (100%)	19 (79%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	0 (0%)	0 (0%)	0 (0%)
Unknown	0 (0%)	0 (0%)	0 (0%)
<b>Total graduates (known + unknown)</b>	<b>21</b>	<b>19</b>	<b>24</b>

**Table B4.1.4 Post-Graduation Outcomes - MPH**

Post-Graduation Outcomes - MPH	2020 Number & percentage	2021 Number & percentage	2022 Number & percentage
Employed	167 (69%)	183 (77%)	158 (68%)
Continuing education/training (not employed)	56 (23%)	36 (15%)	49 (21%)
Not seeking employment or not seeking additional education by choice	1 (0%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	2 (1%)	0 (0%)	3 (1%)
Unknown	17 (7%)	18 (8%)	21 (9%)
<b>Total graduates (known + unknown)</b>	<b>243</b>	<b>237</b>	<b>231</b>

**Table B4.1.5 Post-Graduation Outcomes - DrPH**

Post-Graduation Outcomes - DrPH	2020 Number & percentage	2021 Number & percentage	2022 Number & percentage
Employed	6 (67%)	1 (50%)	5 (83%)
Continuing education/training (not employed)	3 (33%)	1 (50%)	1 (17%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	0 (0%)	0 (0%)	0 (0%)
Unknown	0 (0%)	0 (0%)	0 (0%)
<b>Total graduates (known + unknown)</b>	<b>9</b>	<b>2</b>	<b>6</b>

**Table B4.1.6 Post-Graduation Outcomes - PhD**

Post-Graduation Outcomes - PhD	2020 Number & percentage	2021 Number & percentage	2022 Number & percentage
Employed	7 (37%)	6 (32%)	18 (67%)
Continuing education/training (not employed)	11 (58.%)	12 (63%)	7 (26%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	1 (4%)
Actively seeking employment or enrollment in further education	0 (0%)	0 (0%)	0 (0%)
Unknown	1 (5%)	1 (5%)	1 (4%)
<b>Total graduates (known + unknown)</b>	<b>19</b>	<b>19</b>	<b>27</b>

**(2) Explain the data presented above, including identification of factors contributing to any rates that do not meet this criterion's expectations and plans to address these factors.**

The post-graduation outcomes of our graduates, with 79% to 87% of our BA students, 100% of our MA and MS graduates, 92% of our MPH students, 100% of our DrPH students, and 95% of our PhD students employed or enrolled in further education, met or exceed the bar set by CEPH for post-graduation outcomes.

**(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Our favorable post-graduation outcomes are the result of our reputation and ranking, the rigor of our academic preparation, the quality of our student population, and the support they receive for professional development and career services. BPH has a dedicated Career Services team that provides a full range of resources designed to support students and alumni at all points along the employment path. Located in the RISE: Berkeley Public Health Careers & Leadership Office, Career Services offers one-on-one counseling to graduate students and alumni; facilitates employer and community partnerships; and hosts trainings, workshops, and events. Additionally, Career Services oversees an online platform to promote jobs and other professional opportunities to all levels of students, as well as develops accessible digital resources to support their career development.

Weaknesses: None identified



---

## **B5. Alumni Perceptions of Curricular Effectiveness**

---

**For each degree offered, the school or program collects information on alumni perceptions of their preparation for the workforce (or for further education, if applicable). Data collection must elicit information on what skills are most useful and applicable in post-graduation destinations, areas in which graduates feel well prepared, and areas in which they would have benefitted from more training or preparation.**

**The school or program defines qualitative and/or quantitative methods designed to provide useful information on the issues outlined above. “Useful information” refers to information that provides the unit with a reasonable basis for making curricular and related improvements. Qualitative methods may include focus groups, key informant interviews, etc.**

**The school or program documents and regularly examines its methodology, making revisions as necessary, to ensure useful data.**

- (1) Summarize the findings of alumni self-assessment of their preparation for post-graduation destinations.**

The School of Public Health collects quantitative and qualitative data on alumni perceptions of curricular effectiveness and preparedness for post-graduation destinations. Most recently, in July 2022, an alumni survey was conducted of graduates from the previous three academic years, with a focus on those students exposed to the current foundational competencies. A total of 113 MPH and DrPH alumni who graduated in 2019, 2020, and 2021 completed the survey.

### **Respondent Profile**

Respondents reflect the full range of MPH programs, with the majority of respondents (53%) graduating from programs in the two-year residential MPH, followed by approximately one-quarter (26%) in the Online Master of Public Health program, and the remainder reflecting graduates from the 11-month (8%) and 4+1 MPH programs (8%). Three percent of respondents graduated from the DrPH program.

Respondents are primarily employed (73%), with 13% of respondents in continuing education/training, 5% not seeking employment or continuing education/training, 5% actively seeking employment or continuing education/training, and 4% in a fellowship, internship, or residency.

Employed respondents reflect multiple sectors, with the largest group (41%) employed in academic institutions, followed by 27% in healthcare organizations and 16% in for-profit organizations. The fewest respondents were employed in non-profit, government, or other settings.

**Table B5.1.1 Response Rates (2022 Alumni Survey)**

	% of Invitees	% of Respondents	Response Rate
DrPH	2.4%	2.8%	17.6%
MPH (2-year)	53.8%	54.2%	14.9%
MPH (11-month)	16.1%	8.4%	7.8%
MPH (4+1)	3.2%	8.4%	39.1%
OOMPH	24.5%	26.2%	15.8%

To promote the survey opportunity, alumni received communications from the assistant dean of students in addition to survey reminders. Alumni who completed surveys were entered into a raffle for Amazon gift cards as further incentive. To increase response rates in the future, we will shorten surveys, including reducing the number of optional and open-ended questions. We will also ask faculty to extend reminders to their program alumni. We have also added the collection of preferred, non-berkeley.edu email addresses in the exit survey that is completed by graduating students to ensure that they receive communications at their preferred email addresses as alumni.

### Key Findings

The responses indicate that the large majority of graduates feel prepared to apply skills in each foundational competency area to their current professional activities. At least 80% of respondents reported feeling at least "moderately prepared" in each area, with the largest percentages in *Diversity & Culture* (93%), *Evidence-Based Approaches to Public Health* (93%), and *Systems Thinking* (87%). In particular, the largest percentage of respondents reported feeling "extremely prepared" in the area of *Diversity & Culture* (35%), followed by *Evidence-Based Approaches to Public Health* (32%).

On the other hand, the lowest percentage of respondents reported feeling "extremely prepared" in the area of *Policy in Public Health* (17%), and one-fifth (19%) of respondents reported feeling less than "moderately prepared" (either "slightly prepared" or "not at all prepared") in this area. Similarly, one-fifth (21%) of respondents reported feeling less than "moderately prepared" in *Leadership*, a newer foundational competency area.

**Table B5.1.2 Self-Assessment (2022 Alumni Survey)**

Competency Area	Extremely Prepared	Very Prepared	Moderately Prepared	Slightly Prepared	Not At All Prepared
Evidence-Based Approaches to Public Health	32%	40%	20%	6%	1%
Public Health & Health Care Systems	23%	38%	23%	13%	4%
Planning & Management to Promote Health	21%	33%	32%	11%	2%
Policy in Public Health	17%	30%	35%	18%	1%
Leadership	25%	24%	31%	17%	4%
Communication	26%	39%	19%	12%	4%
Interprofessional Practice	29%	26%	31%	12%	2%
Systems Thinking	29%	32%	26%	8%	5%
Diversity & Culture	35%	33%	25%	5%	2%

*Blue indicates modal category.*

Meanwhile, the majority of respondents identified each of the competency areas as at least “very relevant” to their current job/career, with the exception of *Policy in Public Health* (48%); this area also ranked the lowest when respondents were asked to rank the nine competency areas in order of usefulness to their current job/career. *Leadership*, however, ranked fourth (out of nine), indicating higher perceived relevance to respondents’ professional activities and an opportunity for enhanced curricular effectiveness.

In assessing relevance to their current job/career, the largest percentage of respondents indicated “extremely relevant” for *Communication* (62%), followed by *Diversity & Culture* (54%) and *Evidence-Based Approaches to Public Health* (48%). In the ranking of competency areas by usefulness, *Communication* ranked high (second), following *Evidence-based Approaches to Public Health* (first). Given the high relevance of *Communication*, results indicate there could be an opportunity to further increase graduates’ feelings of preparedness in this area.

Collectively, results indicate that respondents feel especially well prepared in the areas of *Diversity & Culture* and *Evidence-Based Approaches to Public Health*, with respondents also reporting high degrees of relevance/usefulness to their current professional activities.

For each competency area, graduates were also asked to select which sources were important to their development. A required breadth course was cited most frequently as the source for the most competency areas, followed by a required program course and a required applied practice experience. Sources selected less frequently include: elective course; capstone/thesis/comp paper; on-campus job/professional experience; off-campus job/professional experience; academic/professional mentor; and workshop/training offered by the school or campus. Taken together, these results indicate the effectiveness of program requirements in supporting the development of the foundational competencies.

**Table B5.1.3 Top Sources for Competency Development (2022 Alumni Survey)**

Competency Area	Most Common Source
Evidence-Based Approaches to Public Health	Required program course
Public Health & Health Care Systems	Required breadth course
Planning & Management to Promote Health	Required breadth course
Policy in Public Health	Required breadth course
Leadership	Required applied practice experience
Communication	Required program course
Interprofessional Practice	Required applied practice experience
Systems Thinking	Required program course
Diversity & Culture	Required breadth course

Additional qualitative feedback reflects a range of recommendations from graduates to enhance curricular effectiveness. In particular, comments highlight opportunities to expand the integration of real-world projects and other “practical” experiences into the curriculum. Comments include:

- “Class projects with real world clients”
- “More hands-on experiences in the ‘real world’ as part of the course requirements”
- “Practical hands-on approaches to planning and running public health programs. I personally took a lot of practical courses and those were the most beneficial to my current career.”
- “A heavier emphasis on leadership skills, working on/across teams, and project/program management.”
- “Negotiating in the workplace with the goal to increase successful productivity and developing relationships. This could be achieved through workshops, practical ways where we not only learn the skills but we are able to practice them.”

**(2) Provide full documentation of the methodology and findings from quantitative and/or qualitative data collection.**

UC Berkeley School of Public Health conducts regular surveys to collect information about post-graduation destinations and to assess graduate perceptions of curricular effectiveness. An exit survey is distributed annually in the spring, and response rates are historically high as completion is typically required for commencement tickets. In the months following graduation, additional data are collected about new alumni post-graduation destinations, led by the Director of Career Services in the RISE Office.

In July 2022, the Dean's Office and RISE partnered to conduct a survey of recent alumni who had been exposed to the current foundational competencies. Invitations were coordinated to include messaging from the Assistant Dean for Students, and the survey collected quantitative and qualitative data on curricular effectiveness as well as alumni engagement opportunities.

Documentation is available in ERF B5.2.

**(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Results from the most recent alumni survey indicate the curriculum is broadly effective across all foundational competency areas, as well as particularly effective in areas such as diversity/culture and evidence-based approaches to public health (e.g., data collection and analysis). The large majority of graduates feel prepared to apply skills in each competency area, with program requirements most frequently cited as the source of competency development.

Plans for Improvement: The school is working toward a more unified system of data collection, including on alumni perceptions of curricular effectiveness. Plans include regular alumni surveys to inform ongoing curriculum development efforts. In particular, feedback from the most recent alumni survey indicates opportunities to evolve the curriculum to better develop leadership and communication competencies, with qualitative feedback supporting the expansion of real-world projects and practice-based experiences. Plans are already underway in these areas, including the introduction of new leadership courses and the conceptualization of new practice opportunities for students.

The 2022 alumni survey was a pilot whose scope included graduate professional degree program alumni only. We plan to apply improvements specified in B5.1 for the 2023 alumni survey. Starting in 2023, the alumni survey will be offered annually to MPH, DrPH, MA, MS, PhD, and undergraduate program alumni.

---

## C1. Fiscal Resources

---

**The school or program has financial resources adequate to fulfill its stated mission and goals. Financial support is adequate to sustain all core functions, including offering coursework and other elements necessary to support the full array of degrees and ongoing operations.**

**(1) Describe the school or program's budget processes, including all sources of funding. This description addresses the following, as applicable:**

**(a) Briefly describe how the school or program pays for faculty salaries. If this varies by individual or appointment type, indicate this, and provide examples.**

At UC Berkeley, support for faculty salaries varies by appointment type. For ladder-rank faculty, academic year salary is covered by campus "general funds," which are state funds and other central resources, primarily tuition. Teaching salaries for in-residence faculty and adjunct faculty are covered primarily through general funds. The remaining academic year salary for these appointment types are covered through a combination of contracts and grants, gifts, and other incomes. Lecturer's salaries are also drawn from general funds. Summer salaries for the most part are not guaranteed for any appointment type and come from a variety of sources, including tuition for summer classes, contracts and grants, gifts, and other income. Faculty salary is determined based on a standard pay scale with rank and steps and is adjusted for market competitiveness and cost of living. Lecturer salary is established by union rules.

**(b) Briefly describe how the school or program requests and/or obtains additional faculty or staff (additional = not replacements for individuals who left). If multiple models are possible, indicate this and provide examples.**

Each year, the provost separately requests budget submissions for ladder-rank faculty FTE and operating funds from each school and college. The school's ladder-rank faculty FTE is usually limited by an FTE ceiling determined by campus for a campuswide faculty FTE count. Funding for the school's ladder-rank faculty, including salary and benefits increases, are guaranteed and come from campus general funds, discussed in the section above.

In-residence and adjunct faculty are primarily "soft-money," supported through a combination of contracts and grants, general funds for teaching, gifts, and other incomes. Demonstration of financial sustainability is required by the school before recruitment is approved.

Additional funding from campus is not automatically provided each year to cover staff salary and benefit increases or new positions, thus often these cost increases are met through a combination of additional sources including contracts and grants, state general fund, gifts, and other incomes. Internally, staff positions are subject to a "position control" process before a recruitment can be approved, which includes demonstration of financial sustainability to support the proposed position.

**(c) Describe how the school or program funds the following:**

**(a) operational costs (schools and programs define “operational” in their own contexts; definition must be included in response)**

Similar to how teaching salaries of non-ladder rank faculty and staff salaries are funded, a portion of operational costs are funded through the allocation of general funds. Additional funding is not automatically provided each year to cover operational expenses. Any operational cost increases over the years have been met through a combination of additional sources including contract and grant funding, tuition from the school's self-supporting graduate degree program (the Online Master of Public Health program), professional degree supplemental tuition, and gifts (including endowments). Operational costs in this context include: supplies, materials, equipment, services, rent, utilities, and miscellaneous. The miscellaneous category of expenses covers supplier-provided services (e.g., event management, translation, web support, study design, etc.), entertainment, events, trainings, participant support payments, and legal, among others.

**(b) student support, including scholarships, support for student conference travel, support for student activities, etc.**

The school provides direct financial support to students through scholarships. In 2021-22, this support amounted to \$4.6 million. Students can earn additional support through graduate student researcher, graduate student instructor, reader, and tutor positions offered throughout the school. In 2021-22, students holding these positions earned close to \$3.9 million in salary and \$3 million in fee remission.

Student activities are hosted throughout the year by the school's Student Services unit, DREAM office, academic divisions, and research units. In addition to hosting activities, some programs, typically those with training grants, Centers of Excellence, or other discretionary funds provide funding for students to attend conferences and professional meetings. Typically these funds are available to students who have had an abstract accepted to present an oral presentation or poster. There are also conference travel grants available through an application process from the Graduate Assembly for students to attend conferences.

The school provides student support services that augment those provided by campus. For example, in the current academic year the school has budgeted \$20,000 for provisions for an internal food pantry for students. In addition to the food pantry, Student Government is allocated \$10,000 per year to host events and activities to support students. In addition to providing food support, we also provide additional mental health support to students through our professionally facilitated mental health support circles. In the last year, we have allocated approximately \$8,000 for these circles that are open to students in need of extra social supports. We also offer an annual suicide prevention workshop to students to help them identify signs of suicide and learn how to talk about it with fellow students. The Student Services Office also hosts a variety of community building events to help students build relationships with one another. A few examples of these sorts of events include: hosting a lunch for students, staff, and faculty in honor of National Coming Out Day in October and “the blue couch conversations,” an event that brings in a notable public health figure to meet with a small group of approximately 20 students. We serve dinner and then have an informal conversation with the public health leader. The goal of these events is to help students develop and hone their networking skills.

Funding for student support comes from many different sources including gift and endowments, contracts and grants, business contracts, tuition, and general funds.

On an annual basis, all student-facing units in the school submit a budget for the next fiscal year. The dean, CFO, and finance team review any budget augmentation requests and the dean approves requests based on resource availability and programmatic priorities.

**(c) faculty development expenses, including travel support. If this varies by individual or appointment type, indicate this, and provide examples**

Faculty development funding varies by appointment type and by individual. Much of the support for development expenses for senate faculty comes from start-up funds negotiated with each individual faculty member during the hiring process. Both senate and non-senate faculty have various ways to build up discretionary funds that can be used to cover development expenses. For example, state-funded faculty can charge a portion of their effort to contracts and grants creating salary savings on state funds that can be used for development costs. Other faculty can perform consulting services for external entities and bring in discretionary funding that can be used toward their own faculty development or review applications for the Online Master of Public Health program, which in turn generates faculty discretionary funds. These are just a few examples of how faculty can build funds to use at their discretion, which includes toward travel and development.

UC Berkeley funds a [Center for Teaching and Learning](#) which offers training, workshops, and one-on-one consulting to all faculty to improve teaching, as well as offering course improvement grants. The Dean's Office also funds certain development initiatives for faculty. More recently the Dean's Office funded training on anti-racism for all faculty.

**(d) In general terms, describe how the school or program requests and/or obtains additional funds for operational costs, student support and faculty development expenses.**

On an annual basis, the campus releases a budget call letter requesting schools and colleges across campus to prepare a budget for the next fiscal year. In a typical year, this letter is released in January with budgets due in March/April. Budget hearings are held in April/May and budget decisions are communicated by June. The school prepares a budget at the unit level (e.g., academic division, research center, student services, etc.). Research units are planned to operate within projected research funding levels. Administrative units are planned with campus directed salary increases and modest non-salary related cost increases. Academic units are planned to include funding for ladder-rank faculty salary costs and allocated additional funding to cover temporary academic salary support and non-salary related expenses based on a formula that considers student enrollment, student credit hours, and graduate student researcher opportunities. The dean reviews any budget asks that exceed the prior year's budget and prioritizes these requests for funding based on the critical nature of the request and breadth of impact funding the ask will have on the school. Any projected surplus is used to fund the highest priority requests.

The school is required to submit a balanced budget and, if this is not possible, provide strong rationale and request approval to draw down on reserves.



**(e) Explain how tuition and fees paid by students are returned to the school or program. If the school or program receives a share rather than the full amount, explain, in general terms, how the share returned is determined. If the school or program's funding is allocated in a way that does not bear a relationship to tuition and fees generated, indicate this, and explain.**

Presently undergraduate and graduate base tuition and fees do not bear a relationship to campus funding to the school, which is based largely on historical allocation. Under the proposed campus financial sustainability plan, funding to the school will be driven largely by student credit hours, degrees conferred, and indirect cost recovery.

Supplemental tuition for professional degree graduate students is returned directly to the school. In 2021-22, the school received \$4.5 million in Professional Degree Supplemental Tuition (PDST) from MPH, DrPH, and JMP students, and returned \$7.6 million in scholarships and fellowships, far exceeding the 33% requirement for return to aid.

For our online/on-campus MPH (OOMPH) students in the Self-Supporting Graduate Degree Program (SSGDP), the school receives 85% of tuition after a 15% campus tax.

**(f) Explain how indirect costs associated with grants and contracts are returned to the school or program and/or individual faculty members. If the school or program and its faculty do not receive funding through this mechanism, explain.**

The UC Berkeley campus retains all indirect cost recovery from contract and grant overhead. A three-year pilot to return a portion of these funds to campus units ended in 2018. In an effort to support soft money faculty, the school implemented its own pilot program in 2021. Eligible faculty who rely on external sources of funding (e.g., grants, contracts) for at least 50% of their salary receive discretionary funds based on the amount of external funding spent in the fiscal year. Specifically, faculty receive an amount equivalent to 5% of the indirect costs spent from their contracts and grants funding in a given fiscal year as discretionary funds. Ladder-rank faculty are not eligible for this program because they have the opportunity to obtain discretionary funds through the Faculty Salary Research Exchange Program (FSREP) and through holding endowed chairs.

- (2) A clearly formulated school or program budget statement in the format of Template C1-1, showing sources of all available funds and expenditures by major categories, for the last five years.

Table C.1.1 Sources of Funds and Expenditures by Major Category, 2018 to 2022

	2017-18	2018-19	2019-20	2020-21	2021-22
<b>Source of Funds</b>					
Tuition & Fees	6,410,813	7,316,956	7,468,740	8,564,776	10,845,030
State Appropriation	19,612,087	18,366,096	18,885,692	18,195,892	20,384,213
University Funds					
Grants/Contracts	38,154,021	31,650,942	28,604,335	26,828,204	29,459,664
Indirect Cost Recovery	7,845,573	7,003,022	6,161,449	6,379,921	6,538,031
Endowment	2,905,937	2,988,803	3,080,260	3,318,178	3,547,698
Gifts	11,326,587	7,425,240	9,884,564	11,424,780	8,291,403
Other (Sales and Services)	2,931,609	1,431,124	1,613,676	2,150,035	1,380,887
Other (Investment Income)	20,857	31,697	22,306	4,612	1,252
Other (Nonoperating Revenue)	5,000	304,206	-	-	39,679
Other (Other Transfers)	2,412,675	2,366,031	4,854,941	2,983,089	3,088,129
<b>Total</b>	<b>91,625,159</b>	<b>78,884,117</b>	<b>80,575,963</b>	<b>79,849,487</b>	<b>83,575,986</b>
<b>Expenditures</b>					
Faculty Salaries	23,429,873	23,520,139	23,769,112	23,399,624	25,410,087
Staff Salaries	11,518,046	10,727,667	10,898,117	11,716,521	11,997,484
Benefits	11,825,441	10,908,862	11,227,835	11,182,624	11,473,308
Operations	8,875,899	8,513,441	7,498,246	7,860,575	7,017,970
Travel	1,254,675	1,212,968	852,535	-6,597	475,164
Student Support	5,029,272	5,228,000	6,522,321	6,195,031	7,639,750
University Tax	9,560,617	8,787,025	7,965,787	8,656,611	8,949,751
Other (C&G Subawards)	13,973,852	9,179,833	8,288,236	6,835,389	9,838,684
Other (Interest & Finance Exp)	12,963	14,612	12,247	-3,152	26,766
<b>Total</b>	<b>85,480,638</b>	<b>78,092,547</b>	<b>77,034,436</b>	<b>75,836,626</b>	<b>82,828,964</b>

As mentioned in C.1.a., general funds that include both state appropriations and tuition are allocated to the school, but not separately identified. These are reflected in the "State Appropriation" row above and include "University Funds."

"Other Transfers" includes additional funding from other units across the university primarily for summer session/university extension revenue share, academic/research awards, personnel awards & trainings, work-study funding, and gift fee distributions.

“Operations” expenses for purposes of this summary table include: supplies, materials, equipment, services, rent, utilities, and miscellaneous expense.

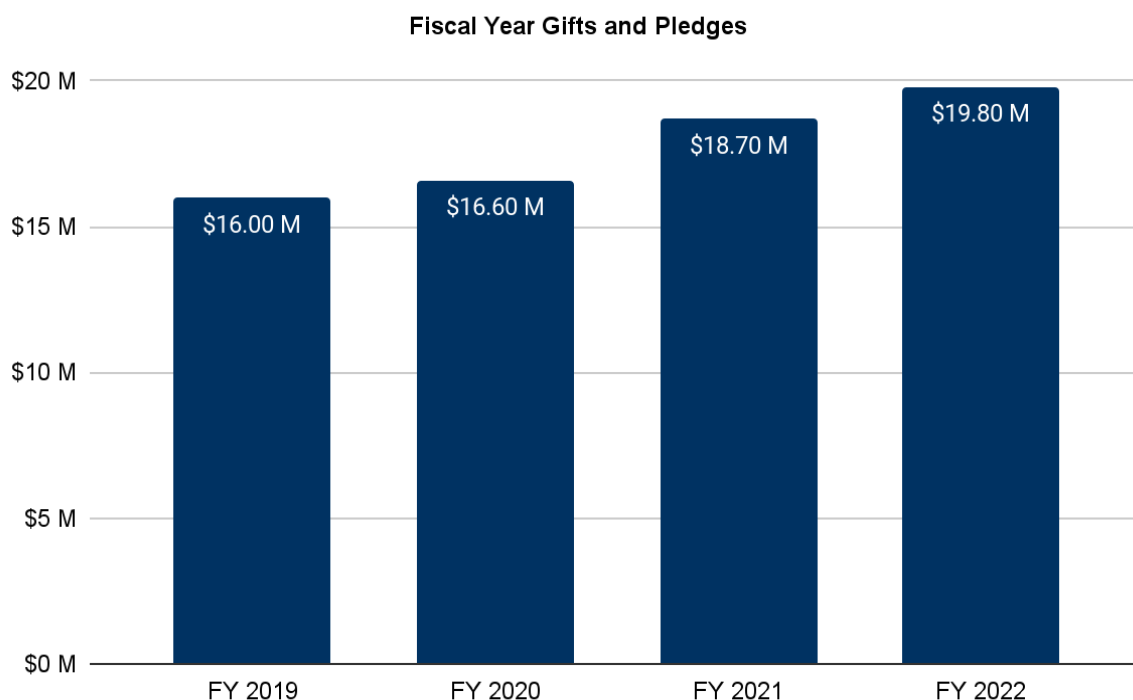
The university taxes different revenue streams at different rates. The “University Tax” line includes a 15% tax on tuition of the school’s self-supporting degree program (Online Master of Public Health), 5% fee on non-research gifts, 10.5% fee on research gifts, 9% administrative full costing fee on sales and services revenue, and an indirect cost rate applied on contract and grant revenue.

**(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths:

- The school has achieved financial stability, eliminating structural deficits in every operating unit and achieving a balanced budget for the last five years.
- Revenue from tuition and fees have increased by 70% from \$6.4 to \$10.9 million in five years, primarily from a 78% increase in student enrollment in our online program from fall 2017 to spring 2022.
- Student support has also increased by over 50%, from \$5.0 to \$7.6 million in five years.
- Philanthropy income through gifts and endowments has remained strong, averaging \$12.8 million annually over the five year period. More importantly, gift pledges have increased by 24% from \$16 million in 2019 to close to \$20 million in 2022, as indicated by Table C2.3.1.

**Table C2.3.1 Fundraising Progress Summary**



Weaknesses:

- The 23% decrease in contract and grant funding over the five year period is expected given the current generational transition in faculty. We anticipate this trend to reverse as our junior faculty become more established and their grant funding success rates increase, though this may take some time.
- State funding has plateaued over the past decade despite a 7% increase in residential student enrollment in our school. While increased funding from the state this past year is encouraging, the impact of the new financial sustainability plan on our general funds remains uncertain.

## C2. Faculty Resources

The school has adequate faculty, including primary instructional faculty and non-primary instructional faculty, to fulfill its stated mission and goals. This support is adequate to sustain all core functions, including offering coursework and advising students. The stability of resources is a factor in evaluating resource adequacy.

Students' access to a range of intellectual perspectives and to breadth of thought in their chosen fields of study is an important component of quality, as is faculty access to colleagues with shared interests and expertise.

All identified faculty must have regular instructional responsibility in the area. Individuals who perform research in a given area but do not have some regular expectations for instruction cannot serve as one of the three to five listed members.

- (1) A table demonstrating the adequacy of the school or program's instructional faculty resources in the format of Template C2-1.

**Table C2.1.1 Adequacy of the School's Instructional Faculty**

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY
CONCENTRATION	PIF 1	PIF 2	FACULTY 3	PIF 4	PIF 5	
BIOSTATISTICS						
MA	Alan Hubbard 1.0	Mark van der Laan 1.0	Jingshen Wang 1.0	Lexin Li 1.0		PIF: 6 Non-PIF: 1
PhD						
ENVIRONMENTAL HEALTH SCIENCES						
MPH	Jay Graham 1.0	Ajay Pillarisetti 1.0	Ellen Eisen 1.0	Rosemarie de la Rosa 1.0		PIF: 3 Non-PIF: 9
MS						
PhD						
EPIDEMIOLOGY						
MPH	Arthur Reingold 1.0	Jennifer Ahern 1.0	Sandra McCoy 1.0	John M Colford 1.0		PIF: 17 Non-PIF: 11
MS						
PhD						

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY
EPIDEMIOLOGY/ BIostatISTICS	Mahasin Mujahid 1.0	Patrick Bradshaw 1.0	Joseph Lewnard 1.0			PIF: 21 Non-PIF: 23
MPH						
GLOBAL HEALTH & ENVIRONMENT	Justin Remais 1.0	Jay Graham 1.0	Layla Kwong 1.0			PIF: 1 Non-PIF: 3
MPH						
HEALTH AND MEDICAL SCIENCES	Jyothi Marbin 1.0	Susan Ivey 1.0	Gustavo Valbuena 0.9			PIF: 0 Non-PIF: 13
MS						
HEALTH & SOCIAL BEHAVIOR	Denise Herd 1.0	Darlene Francis 1.0	Emily Ozer 1.0			PIF: 4 Non-PIF: 13
MPH						
HEALTH POLICY & MANAGEMENT	James Robinson 1.0	Brent Fulton 1.0	Kimberly MacPherson 0.42			PIF: 6 Non-PIF: 10
MPH						
HEALTH POLICY: HEALTH ECONOMICS	William Dow	Stefano Bertozzi	Timothy Brown			PIF: 2 Non-PIF: 0.8
PhD	1.0	1.0	0.8			
HEALTH POLICY: ORGANIZATIONS & MANAGEMENT	Hector Rodriguez	Amanda Brewster	Timothy Brown			PIF: 2 Non-PIF: 0.8
PhD	1.0	1.0	0.8			
HEALTH POLICY: POPULATION & DATA SCIENCE	Ziad Obermeyer	Stefano Bertozzi	William Dow			PIF: 3 Non-PIF: 0
PhD	1.0	1.0	1.0			

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY
INFECTIOUS DISEASES	Filipa Rijo-Ferreira 1.0	Fenyong Liu 1.0	Veronica Miller 1.0			PIF: 1 Non-PIF: 6
MPH						
INFECTIOUS DISEASES & IMMUNITY	Eva Harris 1.0	Fenyong Liu 1.0	Ashley Wolf 0.5			PIF: 1 Non-PIF: 0
PhD						
INTERDISCIPLINARY	Sandra McCoy 1.0	Jodi Halpern 1.0	Anke Hemmerling 0.41			PIF: 3 Non-PIF: 33
MPH						
MATERNAL, CHILD & ADOLESCENT HEALTH	Julianna Deardorff 1.0	Cassandra Marshall 1.0	Ndola Prata 1.0			PIF: 1 Non-PIF: 7
MPH						
PUBLIC HEALTH	Lisa Barcellos 1.0	Kristine Madsen 1.0	Carly Strouse 0.5	Mahasin Mujahid 1.0		PIF: 6 Non-PIF: 12
DrPH						
BA						
PUBLIC HEALTH NUTRITION	Barbara Laraia 1.0	Lia Fernald 1.0	Kristine Madsen 1.0			PIF: 1 Non-PIF: 4
MPH						

<b>TOTALS:</b>	Named PIF	34
	Total PIF	54
	Non-PIF	117

- (2) All primary instructional faculty, by definition, are allocated 1.0 FTE. Schools must explain the method for calculating FTE for any non-primary instructional faculty presented in C2-1.**

The non-primary instructional faculty FTE presented in C2-1 are the payroll FTE for school faculty as of October 2022 for fall instructors, as of April 2022 for instructors who only teach in the spring, and as of June or July 2022 for online program instructors who only teach in the summer. Since faculty FTE for non-primary instructional faculty can fluctuate based on when a faculty member is teaching during the year, these months are considered by campus to be appropriate points in the semester to gather FTE that is most representative of instructional effort for the related semester.

- (3) If applicable, provide a narrative explanation that supplements reviewers' understanding of data in the templates.**

The non-primary instructional faculty counts presented under "Additional Faculty" in template C2-1 above are aggregated FTE. The counts provided in the "Totals" section of this same table are non-primary instructional faculty aggregate headcounts.

- (4) Data on the following for the most recent year in the format of Template C2-2. See Template C2-2 for additional definitions and parameters.**

**Table C2.4.1 Faculty regularly involved in advising, mentoring and the integrative learning experience**

General advising & career counseling			
Degree level	Average	Min	Max
Bachelor's	8.03	1	50
Master's	12.33	1	150
Doctoral	3.96	1	12

Advising in MPH integrative experience		
Average	Min	Max
6.56	1	57
Supervision/Advising of bachelor's cumulative or experiential activity		
Average	Min	Max
4.3	1	36

Mentoring/primary advising on thesis, dissertation or DrPH integrative project			
Degree	Average	Min	Max
DrPH	1.84	1	8
PhD	3.06	1	9
Master's other than MPH	3.53	1	24

"Min" is the lowest number of students that a faculty member advised and "Max" is the highest number of students that a faculty member advised during AY 2021-2022. Only faculty who participated in the activity are included in the calculations. Mentoring/primary advising on thesis, dissertation, or DrPH integrative project counts first readers only.



**(5) Quantitative data on student perceptions of the following for the most recent year:****(a) Class size and its relation to quality of learning (e.g., The class size was conducive to my learning)**

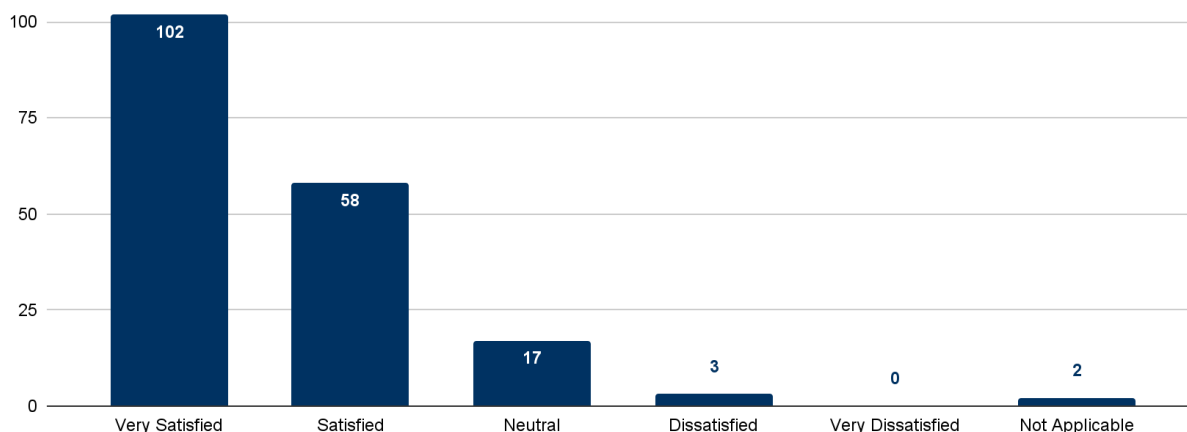
UC Berkeley School of Public Health class sizes are relatively small with an average class size of 25 for graduate students and 51-58 for undergraduate classes over the last two academic years.

	Avg Class Size	Avg Class Size	Avg Class Size
Academic Yr	UnderGraduate	Graduate	
2019-20	51	25	33
2020-21	58	25	34

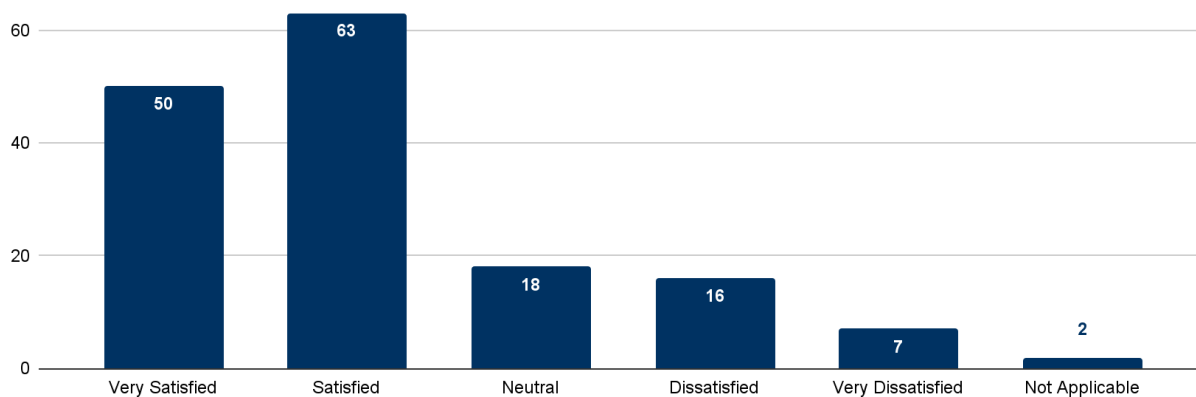
Source: Cal Answers Academic Planning Dashboard - Curriculum Trends

Average class size for doctoral seminars (PH 293s) have increased slightly from eight to 12 students over the period from Fall 2020 to Spring 2022.

In response to BPH's 2022 Exit Survey question asking exiting graduate students to rank their level of satisfaction with their class sizes being conducive to learning, 88% of respondents (89% of master's, 83% of doctoral) selected a rating of "very satisfied" or "satisfied." The 2022 Exit Survey had a 66% response rate from graduate students.

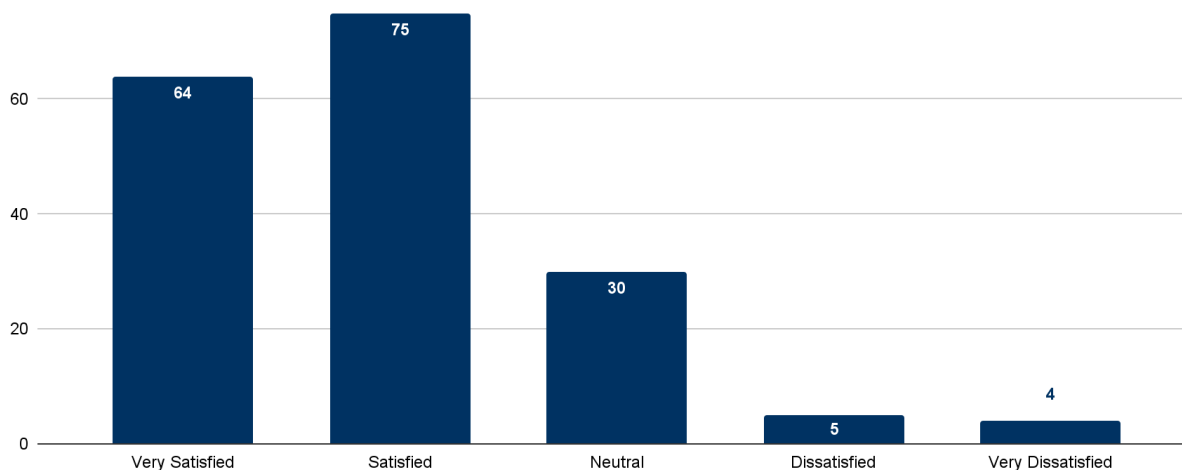


In response to this same question, 74% of exiting undergraduate students selected a rating of "very satisfied" or "satisfied." The 2022 Exit Survey had a 71% response rate from undergraduate students.

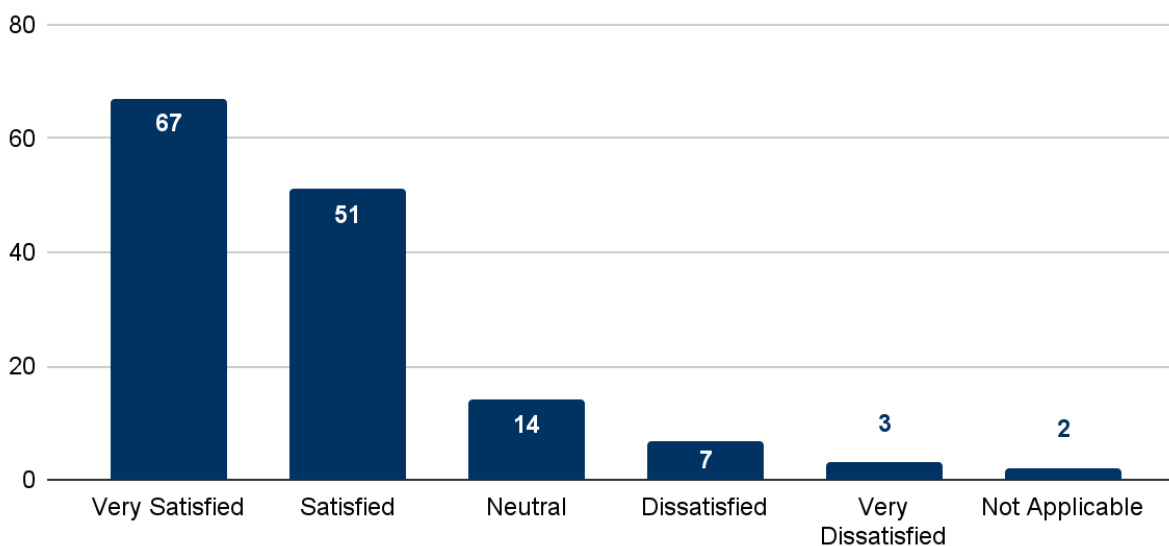


**(b) Availability of faculty (i.e., Likert scale of 1-5, with 5 as very satisfied)**

In response to the school's 2022 Exit Survey question asking exiting graduate students to rank their level of satisfaction with the School of Public Health faculty in their area of concentration, 78% of respondents (78% of master's, 82% of doctoral) selected a rating of "very satisfied" or "satisfied." The 2022 Exit Survey had a 66% response rate from graduate students.



In response to this same question, 82% of exiting undergraduate students selected a rating of "very satisfied" or "satisfied." The 2022 Exit Survey had a 71% response rate from undergraduate students.



**(c) Present data by degree level (bachelor's, master's, doctoral), at a minimum.**

81% of all exiting student respondents selected a rating of “very satisfied” or “satisfied” in relation to satisfaction with class size.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Applicable
Bachelors	57	63	18	16	7	2
Masters	92	49	13	3	0	2
Doctoral	10	9	4	0	0	0
	159	121	35	19	7	4
<b>% of total</b>	46%	35%	10%	6%	2%	1%

80% of all exiting student respondents selected a rating of “very satisfied” or “satisfied” in relation to satisfaction with availability and accessibility of faculty.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Not Applicable
Bachelors	67	51	14	7	3	2
Masters	57	64	27	5	3	0
Doctoral	7	11	3	0	1	0
	131	126	44	12	7	2
<b>% of total</b>	41%	39%	14%	4%	2%	1%

**(6) Qualitative data on student perceptions of class size and availability of faculty. Schools should only present data on public health degrees and concentrations.**

We do not include an open-ended survey question to capture student feedback specific to class size or availability of faculty; however, we do include open-ended questions in our Exit Survey that allow students to comment in general on: 1) the faculty in their area of concentration, 2) overall experience, 3) school strengths, and 4) school weaknesses. We reviewed each response looking for comments related to perceptions of class size and availability of faculty.

Class Size - There were only a couple of comments in the 2022 Graduate Exit survey that related to class size and these comments identified the school's relatively small class sizes as a strength. There were no comments made in the 2022 Undergraduate Exit survey pertaining to class size.

Faculty Availability – Students comments about availability and accessibility of faculty in and outside the classroom varied greatly in the 2022 Graduate Exit survey. The majority of the Graduate and Undergraduate student comments mentioned faculty as a school strength with many positively emphasizing the accessibility of faculty

**(7) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: School faculty are well known for their availability and accessibility to their students; this reputation was supported by the data. For the most part, both BPH undergraduate and graduate students perceive that BPH class size is conducive to learning and faculty in their areas of concentration are available and accessible. Less than 9% of survey respondents were dissatisfied with class size and availability/accessibility of faculty, which is remarkable considering the context of a large public university and significant strain on faculty bandwidth due to recent attrition. Most respondents of the 2022 Graduate Exit Survey entered their programs at the beginning of the COVID-19 pandemic, and certain survey comments about faculty accessibility may reflect initial challenges with online learning and impacts on student belonging and wellness. We expect faculty accessibility issues to lessen as we get back to a new normal, and have also updated student pulse surveys to include questions that gauge student wellness/mental health and provide links to support services/resources. Undergraduate students were slightly less satisfied with class size compared to graduate students. This is to be expected since undergraduate classes are much larger than most graduate classes. To improve the learning experience in large classes, discussion sections are offered to supplement the lecture section and are capped at 40 students for residential classes and 35 students for online classes.

### C3. Staff and Other Personnel Resources

The school or program has staff and other personnel adequate to fulfill its stated mission and goals. The stability of resources is a factor in evaluating resource adequacy.

- (1) A table defining the number of the school or program's staff support for the year in which the site visit will take place by role or function in the format of Template C3-1. Designate any staff resources that are shared with other units outside the unit of accreditation. Individuals whose workload is primarily as a faculty member should not be listed.

**Table C3.1.1 Staff Support**

Role/Function	Headcount Unshared	FTE Unshared	Headcount Shared	FTE Shared
Academic Affairs	5	3.2	0	0.0
Accreditation and Evaluation	2	2.0	0	0.0
Admissions	4	4.0	0	0.0
Alumni Relations	1	1.0	0	0.0
Career Services	4	4.0	0	0.0
Development	4	4.0	0	0.0
Diversity and Inclusion	3	3.0	0	0.0
Finance and Administration	15	14.5	0	0.0
Human Resources	4	4.0	6	3.5
Institutional research and Effectiveness	1	1.0	0	0.0
Information Technology	1	1.0	2	2.0
Marketing and Communications	5	5.0	0	0.0
Public Health Practice and Training	2	1.7	0	0.0
Research Administration—Post-Award	4	4.0	13	11.9
Research Administration—Pre-Award	1	1.0	5	4.5
Research Support	132	103.5	0	0.0
Researcher	14	8.7	0	0.0
Student Affairs	16	14.1	0	0.0
Other non-instructional staff	6	6.0	0	0.0
<b>Total</b>	<b>224</b>	<b>185.8</b>	<b>26</b>	<b>21.9</b>

*Excludes all student positions*

**(2) Provide a narrative description, which may be supported by data if applicable, of the contributions of other personnel.**

All registered UC Berkeley undergraduate and graduate students are eligible for employment in the student assistant series, which allows departments to employ students to perform needed administrative and clerical work, with the student earning an hourly salary and gaining valuable work experience. Additionally, all graduate students, including master's and professional students, are eligible for a range of academic employment opportunities, including positions as graduate student Instructors, readers, tutors, and graduate student researchers. In addition to salary, many of these academic student appointments come with the benefit of partial or full tuition remission.

During any given academic semester, the School of Public Health employs approximately 350 students (head count); roughly half in student assistant positions, supporting administrative needs, and the other half in primarily graduate student instructor (GSI) and graduate student researcher (GSR) positions, supporting instructional and research-related needs, respectively. These other personnel provide key contributions, while also building their experience and skills.

For example, a GSI assists the faculty instructor with course preparation, classroom and/or laboratory teaching, office consultation, and reading student papers; the faculty supervisor helps to prepare the graduate student for their potential future role as a teacher in an academic institution. Similarly, a GSR engages in or assists with research projects under the direction of a Principal Investigator; they perform research broadly related to their degree programs, and may collaborate in the publication of research (as a co-author).

**(3) Provide narrative and/or data that support the assertion that the school or program's staff and other personnel support is sufficient or not sufficient.**

The school has sufficient staff to effectively operate all aspects of the school. Our staff body is approximately 150 people and is supplemented by approximately 350 student employees who work in support of approximately 150 faculty and a student body of 1,200. Each academic division has a staff manager and the academic programs have managers/student advisors. We successfully added several new positions to enhance our student and career advising, as well as other support services. The school also effectively leverages available resources from central offices, such as project management and organizational development support; in addition to having dedicated staff in UC Berkeley's shared services organization (i.e., Berkeley Regional Services) providing pre-award and post-award research administration support, as well as all data processing related to payroll and human resources information management.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Although our staffing is sufficient, it is lean. We continuously assess opportunities to make processes more efficient, including technological innovations, in order to make workloads more manageable and avoid staff burnout. We also seek to build more resiliency within our staffing model (e.g., support positions with the ability to "float"), such that unexpected leaves or departures can be managed more effectively and with less disruption to operations.

---

## C4. Physical Resources

---

**The school or program has physical resources adequate to fulfill its stated mission and goals and to support instructional programs. Physical resources include faculty and staff office space, classroom space, student shared space and laboratories, as applicable.**

**(1) Briefly describe, with data as applicable, the following. (Note: square footage is not required unless specifically relevant to the school or program's narrative.)**

- **Faculty office space**
- **Staff office space**
- **Classrooms**
- **Shared student space**
- **Laboratories, if applicable to public health degree program offerings**

In the late spring of 2018, the School of Public Health made our long-awaited move to the newly constructed Berkeley Way West building, one block from the UC Berkeley Campus Park. The eight-story, 330,000-square-foot, LEED Silver building houses classrooms, offices, open workstations, and collaborative and event spaces designed to serve the students, faculty, and staff of the School of Public Health, as well as the UC Berkeley School of Education and the College of Letters & Sciences' Department of Psychology. The building was conceived of as a home for "healthy futures," as the students, faculty, and staff in each of these disciplines are committed to a future in which health and wellness are more accessible to all, in which there is greater educational opportunity, and in which we possess a deeper understanding of ourselves and our humanity.

Prior to the construction of Berkeley Way West, following the demolition of our prior building, Warren Hall, in 2007, our community was divided into several campus buildings, most notably University Hall and Haviland Hall. With the new building, we have been able to bring most of our students, faculty, and staff together in one "home." The main exception is our wet lab faculty, primarily in the Division of Infectious Diseases and Vaccinology; our wet lab facilities are housed in several campus buildings, all within walking distance of Berkeley Way West (Barker Hall, Koshland Hall, Mulford Hall, Stanley Hall, and the Li Ka Shing Center). We also maintained space in University Hall for several research centers/groups and for the UC Berkeley-UCSF Joint Medical Program, and in two other nearby locations for additional large research centers, as well as in Richmond and Salinas, California, and in Washington, DC. In total, the UC Berkeley School of Public Health currently occupies ~100,000 assignable square feet of space.

Faculty office space and staff work space are primarily on the 5th and 6th floors of Berkeley Way West. The 1st and 2nd floors are student-centric, with classrooms, including two large colloquia rooms, on the 1st floor. The 2nd floor houses Student Services & Admissions, including our undergraduate student advising, DREAM office, and RISE office, as well as a student lounge and shared student spaces; doctoral students have additional space dedicated to them on the 5th floor. Berkeley Way West is outfitted with the latest technology, with numerous equipped conference rooms and classrooms.

**(2) Provide narrative and/or data that support the assertion that the physical space is sufficient or not sufficient.**

The school currently has sufficient physical space to effectively operate all aspects of the school. We currently occupy more than 90,000 assignable square feet of space, spanning 11 physical locations, including several “wet” laboratories, to accommodate our 450+ faculty, research academics, and staff.

**(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Plans for Improvement: Although our current physical space is sufficient, as we continue to grow our student, faculty, and staff bodies, our space allocation will need to grow as well. The university maximized the development potential of the Berkeley Way West site to provide for potential future university needs. The top three floors of the building were designed to be leased to private tenants. The private tenant occupancy for an interim period allowed the university to afford the expanded space, capitalizing on an opportunity to meet space demand despite limited funding. Once revenue goals are met, the space will revert to university occupancy. The school's goal is to, in time, occupy all of an additional floor in Berkeley Way West (i.e., the 6th Floor) to accommodate our planned future growth.



---

## C5. Information and Technology Resources

---

**The school or program has information and technology resources adequate to fulfill its stated mission and goals and to support instructional programs. Information and technology resources include library resources, student access to hardware and software (including access to specific software or other technology required for instructional programs), faculty access to hardware and software (including access to specific software required for the instructional programs offered) and technical assistance for students and faculty.**

**(1) Briefly describe, with data if applicable, the following:**

- **library resources and support available for students and faculty**

In 2018, the physical resources and staff of the Sheldon Margen Public Health Library were merged with the Marian Koshland Bioscience Library, creating the Marian Koshland Bioscience, Natural Resources & Public Health Library (BNRPHL) at UC Berkeley. BNRPHL serves the entire campus community, including students, faculty, and staff of the UC Berkeley School of Public Health. The public health and optometry librarian is the principal contact for the school within the library, and due to public health's interdisciplinary nature researchers, is frequently assisted by subject specialty librarians in sociology, anthropology, law, political science, environmental design, biology, engineering, and business. The public health and optometry librarian is the primary subject liaison to the school, providing guest lectures; workshops and course-based instruction; communication about new library resources and services; research consultations faculty and students; acquisition of databases, journals, datasets, books, and other resources; and development of subject and course-specific research guides for public health courses.

BNRPHL maintains over 75 School of Public Health LibGuides research guides including a research guide for nearly every Online Master of Public Health course. The public health and optometry librarian provides research and resource orientation to all new students, including separate orientations for online students. The librarian also conducts numerous in-class sessions and drop-in instruction on literature searching, bibliographic indices, health statistics and data, citation management, and research data management. Reference services are provided through in-person and Zoom weekly office hours, email, and individual appointment-based consultations. Public Health reference services are supplemented by the generalized 24x7 chat reference service provided to all UC Berkeley affiliates.

The UC Berkeley Library holds 13.5 million volumes, and in July 2021, the new University of California-wide online library catalog was unveiled, expanding students' ready access to over 50 million volumes across all the UC campuses. Our new integrated library system, as well as continued increasing investments in online journals, books, videos, and data have reduced the importance of the "library" as a solely place-based entity. School affiliates can access millions of online books and articles 24/7 from thousands of sources. Print-based material from university sources around the state and beyond may be requested to be delivered to the patron's UC Berkeley library of choice. Book chapters and journal articles held in off-campus storage are scanned and delivered upon request—sometimes within a couple of hours. Among the many specialized resources available to public health faculty and students are the Global Health Database, Embase, CINAHL, PHAROS, Covidence (systematic review tool), TRIP Pro, JAMA Evidence, AccessMedicine, and Cochrane Library. All UC Berkeley affiliates have access to nearly 1,500 online databases.

Besides acquiring and providing access to library resources, BNRPHL serves as an information gateway to many campus-based services relevant to public health students, staff, and faculty through collaboration and referral. For example, referrals to the library's Office of Scholarly Communication provide school affiliates with copyright, publishing, and open access guidance; collaboration with UC Berkeley's Research Data Management (RDM) Program assists with data management, data collection, and secure research computing assistance. In 2021, RDM began providing access to REDCap, a data collection tool that facilitates secure collection of protected health information; this addressed an increasing need of researchers, particularly BPH researchers. The public health and optometry librarian works with RDM to educate public health community members of NIH data sharing requirements via workshops and web guides. The librarian also refers public health affiliates to the Graduate Writing Center (writing and dissertation assistance); D-Lab (data assistance); and elsewhere.

UC and UC Berkeley libraries are among the world's finest and the school has access to the most expansive resources and expert librarians to teach and guide students, staff, and faculty in their use.

- **student access to hardware and software (including access to specific software or other technology required for instructional programs)**

UC Berkeley provides technology support for undergraduate and graduate students, including free software and device lending. The catalog of software is available at <https://software.berkeley.edu/software-catalog>. The Library Technology Lending Program provides short-term loans of laptops, adapters, chargers, headphones, projectors, and other accessories for up to 14 days. The Student Technology Equity Program (STEP) provides need-based, long-term loans for laptops, Wi-Fi hotspots, and other tech hardware to students on a rolling basis throughout the academic year. Wireless connections are available across the UC Berkeley campus and in UC Berkeley School of Public Health facilities, including classrooms, lounges, and libraries. [High performance computing](#) and [secure computing](#) options are available to students involved in faculty research programs.

- **faculty access to hardware and software (including access to specific software or other technology required for instructional programs)**

UC Berkeley School of Public Health provides each faculty with their own computer. UC Berkeley provides technology support for faculty, including free software. The catalog of software is available at <https://software.berkeley.edu/software-catalog>. REDCap software is available for secure data collection for research projects. Hardware is replaced as needed and all software is current, with updates done on a regular basis. Remote file access is available to those who are traveling or working from more than one location. Faculty use bcourses, UC Berkeley's Learning Management System (LMS) using the open-source Canvas platform, to post lecture materials, homework, and readings as well as to promote discussion between students. Savio is a Linux cluster with high-speed, low-latency networking and a high-speed parallel file system for high performance computing. Faculty access the Savio high performance computing system through faculty computing allowances that provide free access for principal investigators and their group or their collaborators, and supporting infrastructure and administrative support at no charge.

- **technical assistance available for students and faculty**

The Student Helpdesk, part of Student Tech Services (STS) at UC Berkeley, provides free tech support to all graduate, professional, and undergraduate students at UC Berkeley. Helpdesk services are available in-person, by phone, by email, and over Zoom. The Student Helpdesk assists with resolving WiFi problems and getting connected to the campus network, accessing and optimizing free campus software

(including Adobe, Microsoft, Zoom, etc.), troubleshooting personal device issues, removing malware, ensuring security, and locating campus resources for device lending and hardware discounts.

IT Client Services (ITCS) at UC Berkeley provides technical support for faculty, staff, and student employees through the IT Service Desk, Device Provisioning, Device Support, and Engineering and Security teams. ITCS support campus applications, troubleshoot wired and Wi-Fi networks, help faculty and staff purchase IT equipment, provide file share management, and are available for general IT consulting.

UC Berkeley's Research Information Technology group (Research IT) provides research computing technologies, consulting, and community for the Berkeley campus. Research IT offers three core services: 1) research information technologies such as high-performance computing, research data management, research application development, and data analysis tools; 2) consulting on grant proposal development, data management plans, and strategic planning; 3) building collaborative communities of researchers and IT professionals. Research IT assists faculty and students in selecting and using the computing resources best suited to their research.

Consultants in UC Berkeley's D-Lab offer workshops, training, and advisory services to assist with the full cycle of research projects including research design, survey methods, sample design, data acquisition, statistical methods, evaluation and communication of results. Consultants have advanced knowledge in technical applications such as Python, R, GIS, and NVivo and data science techniques such as machine learning and natural language processing. D-Lab provides access to a broad range of social science data and works with researchers to help them understand the content and use of these data. D-Lab also provides boot camp style training for students in R and other statistical programs that students need to complete their biostatistics requirements.

The OOMPH program and some BPH faculty helped design a self-paced series of training modules in basic mathematics and statistics that students could utilize to help them prepare for the rigors of quantitative coursework such as biostatistics and epidemiology.

**(2) Provide narrative and/or data that support the assertion that information and technology resources are sufficient or not sufficient.**

Annual exit survey of graduating students asks students to rate their level of satisfaction with School of Public Health services and resources (Q3.1), including the Public Health Library. They are also asked to comment on the quality and availability of library and electronic research resources, software, computers, and other campus resources (Q3.2).

Ratings for Q3.1 are based on a five-point scale ranging from "very satisfied" to "very dissatisfied" or "not applicable." In the spring of 2022, 72% of graduate student respondents and 49% of undergraduate student respondents selected "very satisfied" or "satisfied" for Q3.1.

Qualitative feedback from graduate students (Q3.2) includes several comments indicating that many resources were provided, such as additional support during the pandemic.

It is important to note that during the pandemic, campus was experiencing issues with stable internet connection for campus users which affected the availability of the library's electronic resources. This likely affected the satisfaction ratings provided by undergraduate students and was mentioned in one comment in the 2022 undergraduate exit survey. Campus invested resources in addressing this issue and the issue has been resolved as of fall 2022.

Qualitative feedback from undergraduate students also showed that some students were not aware of the Public Health Library. This has been addressed by the program leadership through regularly advertising this resource:

- A brief video introducing the library is sent annually to all new and prospective BPH undergraduate students,
- Library orientation session is offered during new student orientation programming including an all purpose resource list: <https://guides.lib.berkeley.edu/publichealth/10things>,
- Our librarian emails student lists with periodic updates about the library resources and main websites to access the library
  - <https://www.lib.berkeley.edu/visit/bioscience>
  - <https://guides.lib.berkeley.edu/publichealth/subjects>
  - <https://guides.lib.berkeley.edu/publichealth/litsearch>, and
- Regular librarian office hours are held twice a week in our designated graduate student space (Suite 2220)

**(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: UC Berkeley and the UC Berkeley School of Public Health provide ample information and technology resources to fulfill its stated mission and goals and to support instructional programs, including world-class library resources, state-of-the-science hardware and software for faculty and students, and technical assistance especially for students (and faculty) who are less well-prepared for new information and technology needs.

Plans for Improvement: Not all students are aware of available information and technology resources, in particular undergraduate students, as indicated by responses to the 2022 exit survey of graduating students. Library leadership has implemented orientation sessions, additional communications, and office hours to promote library resources. The UC Berkeley Campus IT Infrastructure team initiated a project in 2020 to improve the density of the UC Berkeley Wi-Fi network throughout campus over the next several years to improve performance and reliability, improve the campus user experience, increase the efficiency of networking services and better support teaching and research. These improvements should resolve issues with internet connectivity reported by BPH students in the exit survey, and by Wi-Fi users across campus.

This Page Intentionally Left Blank

## D1. MPH and DrPH Foundational Public Health Knowledge

The school ensures that all MPH and DrPH graduates are grounded in foundational public health knowledge.

The school validates MPH and DrPH students' foundational public health knowledge through appropriate methods.

- (1) Provide a matrix, in the format of Template D1-1, that indicates how all MPH and DrPH students are grounded in each of the defined foundational public health learning objectives (1-12). The matrix must identify all options for MPH and DrPH students used by the school.

MPH students are grounded in each of the 12 foundational public health learning objectives through required quantitative core and breadth courses usually taken in the student's first year.

**Table D1.1.1 Foundational Knowledge Coverage for MPH**

Content	Course
1. Explain public health history, philosophy, and values	<b>PB HLTH 200L:</b> Health and Social Behavior Breadth Course ( <b>residential: all except HSB MPH</b> ) <b>PB HLTH 203A:</b> Theories of Health and Social Behavior ( <b>HSB MPH</b> ) <b>PB HLTH W200G:</b> Introduction to Health and Social Behavior ( <b>online</b> )
2. Identify the core functions of public health and the 10 Essential Services	<b>PB HLTH 200J:</b> Health Policy and Management Breadth Course ( <b>residential: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH</b> ) <b>PB HLTH 223D:</b> Foundations of HPM ( <b>2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH</b> ) <b>Online Orientation to HPM (MBA/MPH)</b> <b>PB HLTH W200E:</b> Introduction to Health Policy and Management ( <b>online</b> )
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	Quantitative <b>PB HLTH 250A:</b> Epidemiologic Methods I ( <b>residential</b> ) <b>PB HLTH W250:</b> Epidemiologic Methods I ( <b>online</b> )  Qualitative <b>PB HLTH 291A:</b> Public Health Practice & Leadership Seminar ( <b>residential: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH</b> ) <b>PB HLTH 223C:</b> Strategic Management in the Health Sector ( <b>2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective</b> ) <b>PB HLTH 224A:</b> Organizational Behavior and Management in Health Care ( <b>2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective</b> ) <b>PB HLTH W289:</b> Interdisciplinary Seminar ( <b>online</b> )

Content	Course
4. List major causes and trends of morbidity and mortality in the U.S. or other community relevant to the school or program	<b>PB HLTH 250A:</b> Epidemiologic Methods I ( <b>residential</b> ) <b>PB HLTH W250:</b> Epidemiologic Methods I ( <b>online</b> )
5. Discuss the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.	<b>PB HLTH 250A:</b> Epidemiologic Methods I ( <b>residential</b> ) <b>PB HLTH W250:</b> Epidemiologic Methods I ( <b>online</b> ) and <b>PB HLTH 200L:</b> Health and Social Behavior Breadth Course ( <b>residential: all except HSB MPH</b> ) <b>PB HLTH 203A:</b> Theories of Health and Social Behavior ( <b>HSB MPH</b> ) <b>PB HLTH W200G:</b> Introduction to Health and Social Behavior ( <b>online</b> )
6. Explain the critical importance of evidence in advancing public health knowledge	<b>PB HLTH 250A:</b> Epidemiologic Methods I ( <b>residential</b> ) <b>PB HLTH W250:</b> Epidemiologic Methods I ( <b>online</b> )
7. Explain effects of environmental factors on a population's health	<b>PB HLTH 200K:</b> Environmental Health Sciences Breadth Course ( <b>residential: all except EHS MPH and GHE MPH</b> ) <b>PB HLTH 270:</b> Introduction to Environmental Health Sciences ( <b>EHS MPH, GHE MPH</b> ) <b>PB HLTH W200F:</b> Introduction of Environmental Health Sciences ( <b>online</b> )
8. Explain biological and genetic factors that affect a population's health	<b>PB HLTH 200L:</b> Health and Social Behavior Breadth Course ( <b>residential: all except HSB MPH</b> ) <b>PB HLTH 203A:</b> Theories of Health and Social Behavior ( <b>HSB MPH</b> ) <b>PB HLTH W200G:</b> Introduction to Health and Social Behavior ( <b>online</b> )
9. Explain behavioral and psychological factors that affect a population's health	<b>PB HLTH 200L:</b> Health and Social Behavior Breadth Course ( <b>residential: all except HSB MPH</b> ) <b>PB HLTH 203A:</b> Theories of Health and Social Behavior ( <b>HSB MPH</b> ) <b>PB HLTH W200G:</b> Introduction to Health and Social Behavior ( <b>online</b> )
10. Explain the social, political, and economic determinants of health and how they contribute to population health and health inequities	<b>PB HLTH 200L:</b> Health and Social Behavior Breadth Course ( <b>residential: all except HSB MPH</b> ) <b>PB HLTH 203A:</b> Theories of Health and Social Behavior ( <b>HSB MPH</b> ) <b>PB HLTH W200G:</b> Introduction to Health and Social Behavior ( <b>online</b> )
11. Explain how globalization affects global burdens of disease	<b>PB HLTH 200K:</b> Environmental Health Sciences Breadth Course ( <b>residential: all except EHS MPH and GHE MPH</b> ) <b>PB HLTH 270:</b> Introduction to Environmental Health Sciences ( <b>EHS MPH, GHE MPH</b> ) <b>PB HLTH W200F:</b> Introduction of Environmental Health Sciences ( <b>online</b> )

Content	Course
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)	<b>PB HLTH 200K:</b> Environmental Health Sciences Breadth Course <b>(residential: all except EHS MPH and GHE MPH)</b> <b>PB HLTH 270:</b> Introduction to Environmental Health Sciences <b>(EHS MPH, GHE MPH)</b> <b>PB HLTH W200F:</b> Introduction of Environmental Health Sciences <b>(online)</b>

PB HLTH W200: Foundations of Public Health Practice is an online course that covers the 12 Foundational Public Health Learning Objectives. DrPH students who have not previously completed a MPH degree from a CEPH-accredited school will take courses listed in **Table D1.1.2 Foundational Knowledge Coverage for DrPH** to meet all areas.

**Table D1.1.2 Foundational Knowledge Coverage for DrPH**

Content	Course
1. Explain public health history, philosophy, and values	<b>PB HLTH W200:</b> Foundations of Public Health Practice
2. Identify the core functions of public health and the 10 Essential Services	
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	
4. List major causes and trends of morbidity and mortality in the U.S. or other community relevant to the school or program	
5. Discuss the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.	
6. Explain the critical importance of evidence in advancing public health knowledge	
7. Explain effects of environmental factors on a population's health	
8. Explain biological and genetic factors that affect a population's health	
9. Explain behavioral and psychological factors that affect a population's health	
10. Explain the social, political, and economic determinants of health and how they contribute to population health and health inequities	
11. Explain how globalization affects global burdens of disease	
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)	



- (2) Document the methods described above. This documentation must include all referenced syllabi, samples of tests or other assessments and web links or handbook excerpts that describe admissions prerequisites, as applicable.**

Documentation is available in ERF D1.2.

- (3) If applicable, assessment of strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: MPH students are grounded in each of the 12 foundational public health learning objectives through required quantitative core and breadth courses usually taken in the student's first year.

---

## D2. MPH Foundational Competencies

---

The school documents at least one specific, required assessment activity (e.g., component of existing course, paper, presentation, test) for each competency, during which faculty or other qualified individuals (e.g., teaching assistants or other similar individuals without official faculty roles working under a faculty member's supervision) validate the student's ability to perform the competency.

Assessment opportunities may occur in foundational courses that are common to all students, in courses that are required for a concentration or in other educational requirements outside of designated coursework, but the school must assess *all* MPH students, at least once, on each competency. Assessment may occur in simulations, group projects, presentations, written products, etc. This requirement also applies to students completing an MPH in combination with another degree (e.g., joint, dual, concurrent degrees).

Since the unit must demonstrate that all students perform all competencies, units must define methods to assess individual students' competency attainment in group projects. Also, assessment should occur in a setting other than an internship, which is tailored to individual student needs and designed to allow students to practice skills previously learned in a classroom. Additionally, assessment must occur outside of the integrative learning experience (see Criterion D7), which is designed to integrate previously attained skills in new ways.

These competencies are informed by the traditional public health core knowledge areas, (biostatistics, epidemiology, social and behavioral sciences, health services administration and environmental health sciences), as well as cross-cutting and emerging public health areas.

- (1) List the coursework and other learning experiences required for the school or program's MPH degrees, including the required curriculum for each concentration. Information may be provided in the format of Template D2-1 (single- and multi-concentration formats available) or in hyperlinks to student handbooks or webpages, but the documentation must present a clear depiction of the requirements for each MPH degree.

The Division of Environmental Health Sciences offers the MPH degree in Environmental Health Sciences through a two-year residential on-campus program.

**Table D2.1.1 Requirements for MPH Degree, Environmental Health Sciences**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
EHS MPH Concentration Requirements		
PB HLTH 270	Introduction to Environmental Health Sciences	3
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 270B/NUSCTX 110*	Toxicology I	4
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 271E	Science and Policy for Environmental Health	3
PB HLTH 292	EHS Masters Seminar (Career Pathways )	1
<b>One of the following:</b>		
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 241	Statistical Analysis of Categorical Data	4
<b>At least one of the following:</b>		
PB HLTH C256	Human Genome, Environment, & Public Health	4
PB HLTH 270C	Practical Toxicology	2
PB HLTH 273	Environmental Determinants of Infectious Disease	3
PB HLTH 254	Occupational and Environmental Epidemiology	3
PB HLTH W272A	Introduction to GIS in Public Health	3
PB HLTH W272C	Applied Spatial Data Science for Public Health	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 292	EHS Masters Seminar - fall (capstone preparation)	3
PB HLTH 292	EHS Masters Seminar - spring (capstone)	2
Electives		
	<i>Minimum total units of elective coursework**</i>	2-4

\* PB HLTH 270B: Toxicology I is in the process of being redesigned

\*\* Program faculty directors request and review course syllabi and reading lists for any electives outside the School of Public Health every two years to ensure the courses contain relevant public health content to warrant counting toward MPH requirements. Course instructors are contacted to discuss courses where the degree and depth of coverage of public health content cannot be discerned through reviewing syllabi and reading lists.

**The Division of Epidemiology offers the MPH degree in Epidemiology/Biostatistics through a two-year residential on-campus program and 4+1 BA/MPH program, and the MPH degree in Epidemiology through an 11-month residential on-campus program and on-campus/online program.**

Students work with their assigned faculty advisors to create a curriculum that makes sense for their educational and professional goals. To assure that elective courses external to the school contain relevant public health content to warrant counting toward MPH requirements, faculty review syllabi to confirm that the course covers MPH foundational and/or concentration competencies. The program maintains a list of recommended electives in student handbooks that are pre-vetted by faculty as well as recommended certificate programs (e.g. Applied Data Science, Food Systems) and designated emphases (e.g. Computational Precision Health, Computational Biology) that are pre-approved.

**Table D2.1.2 Requirements for 2-year MPH Degree, Epidemiology / Biostatistics**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142 or PB HLTH 245*	Introduction to Probability and Statistics in Biology or Introduction to Multivariate Statistics	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A or PB HLTH W250	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
2-year EPI/BIO MPH Concentration Requirements		
PB HLTH 241 or PB HLTH W241	Intermediate Biostatistics for Public Health	4
PB HLTH 250B or PB HLTH W250B	Epidemiologic Methods II	4
PB HLTH 252 or PB HLTH W252	Epidemiological Analysis	4
PB HLTH 271K	Introduction to Data Management and Programming in SAS for Public Health	2
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 292	Epi/Bio Seminar for Epi/Bio students (1st Semester)	2
PB HLTH 292	Capstone Research Seminar (3rd Semester)	2
PB HLTH 292	Capstone Presentation Seminar (4th Semester)	2
Electives		
	<i>Minimum total units of elective coursework</i>	11 - 14

\* Students take PB HLTH 142 if no previous coursework in statistics, otherwise they may enroll in PB HLTH 245

**Table D2.1.3 Requirements for 11-Month MPH Degree, Epidemiology**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A or PB HLTH W250	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
11-Month EPI MPH Concentration Requirements		
PB HLTH 241 or PB HLTH W241	Intermediate Biostatistics for Public Health	4
PB HLTH 245	Multivariate Statistics	3
PB HLTH 250B or PB HLTH W250B	Epidemiologic Methods II	4
APE & ILE Courses		
PB HLTH 292	MPH Seminar for Epi 11-Month Students (fall)	2
PB HLTH 292	MPH Seminar for Epi 11-Month Students (spring)	2
PB HLTH 299	Summer MPH Seminar	4
Electives		
	<i>Minimum total units of elective coursework</i>	9 - 12

**Table D2.1.4 Requirements for Online MPH Degree, Epidemiology/Biostatistics**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH W142	Introduction to Probability and Statistics	4
PB HLTH W200E	Health Policy and Management Breadth Course	3
PB HLTH W200F	Environmental Health Sciences Breadth Course	2
PB HLTH W200G	Health and Social Behavior Breadth Course	3
PB HLTH W250	Epidemiologic Methods I	3
PB HLTH W289	Interdisciplinary Seminar	3
Online EPI MPH Concentration Requirements		
PB HLTH W241	Intermediate Biostatistics for Public Health	4
PB HLTH W250B	Epidemiologic Methods II	4

Course number	Course name	Credits
<b>Data Management (one of the following)</b>		
PB HLTH W251	R for Public Health	2
PB HLTH 271K	Introduction to Data Management and Programming in SAS for Public Health	2
<b>Additional Courses in Epidemiology and Biostatistics (at least 5 units)</b>		
PB HLTH W219	Introduction to Survey Methods	3
PB HLTH W225A	Introduction to Applied Implementation Science	1
PB HLTH W225B	Implementation Science: Applied Case Studies	1
PB HLTH W251B	Data Visualization for Public Health	2
PB HLTH W252	Epidemiological Analysis	4
PB HLTH 252C	Intervention Trial Design	2
PB HLTH W253	Outbreak Investigations	3
PB HLTH W268	Water, Sanitation, and Hygiene (WaSH) for Health and Development	3
PB HLTH W272C	Applied Spatial Data Analysis for Public Health	3
<b>Electives</b>		
	<i>Minimum total units of elective coursework</i>	9

**Table D2.1.5 Requirements for 4+1 MPH Degree, Epidemiology / Biostatistics**

Course number	Course name	Credits
<b>UC Berkeley School of Public Health - Core Requirements</b>		
PB HLTH 142*	Introduction to Probability and Statistics in Biology	4
PB HLTH 278	4+1 Seminar	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 291A	Public Health Leadership	2
<b>4+1 EPI/BIO MPH Concentration Requirements</b>		
PB HLTH 241 or PB HLTH W241	Intermediate Biostatistics for Public Health	4
PB HLTH 250B or PB HLTH W250B	Epidemiologic Methods II	4
PB HLTH 252 or PB HLTH W252	Epidemiological Analysis	4
PB HLTH 271K	Introduction to Data Management and Programming in SAS for Public Health	2
<b>APE &amp; ILE Courses</b>		
PBHLTH 297	Public Health Field Placement (summer)	3

Course number	Course name	Credits
PB HLTH 292	Capstone Research Seminar (fall)	2
PB HLTH 292	Capstone Presentation Seminar (spring)	2
Electives		
	<i>Minimum total units of elective coursework</i>	15

\* Students take PB HLTH 142: Introduction to Probability and Statistics in Biology as part of their undergraduate degree

**Table D2.1.6 Requirements for MPH Degree, Global Health and Environment**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
GHE MPH Concentration Requirements		
PB HLTH 270	Introduction to Environmental Health Sciences	3
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 292	EHS Masters Seminar (Career Pathways )	1
<b>One of the following:</b>		
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 241	Statistical Analysis of Categorical Data	4
<b>At least three of the following:</b>		
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 270B/NUSCTX 110*	Toxicology I	4
PB HLTH 271C	Drinking Water and Health	3
PB HLTH 271E	Science and Policy for Environmental Health	3
PB HLTH 271G	Health Implications of Climate Change	3
PB HLTH W272A	Introduction to GIS in Public Health	3
PB HLTH W272C	Applied Spatial Data Science for Public Health	3
PB HLTH 273	Environmental Determinants of Infectious Disease	3
PB HLTH 290	Health Issues Seminar: Air Pollution, Climate, and Health	2
PB HLTH 290	Health Issues Seminar: Global Occupational Health and Safety	4



Course number	Course name	Credits
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 292	EHS Masters Seminar - fall (capstone preparation)	3
PB HLTH 292	EHS Masters Seminar - spring (capstone)	2
Electives		
	<i>Minimum total units of elective coursework**</i>	5-8

\* PB HLTH 270B: Toxicology I is in the process of being redesigned

\*\* Program faculty directors request and review course syllabi and reading lists for any electives outside the School of Public Health every two years to ensure the courses contain relevant public health content to warrant counting toward MPH requirements. Course instructors are contacted to discuss courses for which the degree and depth of coverage of public health content cannot be discerned through reviewing syllabi and reading lists.

**The Division of Community Health Sciences offers the MPH degree in Health and Social Behavior through a two-year residential on-campus program**

**Table D2.1.7 Requirements for two-year MPH Degree, Health and Social Behavior**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
2-year HSB MPH Concentration Requirements		
PB HLTH 203A	Theories of Health and Social Behavior	3
PB HLTH 292.001	MPH Seminar: Introduction to HSB	2
PB HLTH 292.002	Capstone Course in HSB	1-4
PB HLTH 205	Program Planning & Needs Assessment	4
PB HLTH 218B	Evaluation of Health and Social Programs	4
<b>HEALTH, RACE, AND SOCIAL EQUITY REQUIREMENT (at least one of the following)</b>		
PB HLTH 202B	Ethnic and Cultural Diversity in Health Status	4
PB HLTH 204G	Research Advances in Health Disparities	1-3
PB HLTH 255A	Social Epidemiology	4
PB HLTH 290	Structural Competency: A New Medicine for the Inequalities that Make Us Sick (fall)	3
PB HLTH 290	Human Reproductive and Genetic Technologies: Social, Ethical, and Legal Implications (spring)	1-4

Course number	Course name	Credits
PB HLTH 290	Bioethics: From Nuremberg to Modern Times (spring)	1-4
<b>RESEARCH METHODS REQUIREMENT (at least one of the following)</b>		
PB HLTH 219C	Community-Based Participatory Research	3-4
PB HLTH 219E	Introduction to Qualitative Methods (spring, every year)	3
PB HLTH 241	Statistical Analysis of Categorical Data	4
PB HLTH 255D	Methods in Social Epidemiology	2
PB HLTH W272A	Introduction to Geographic Information Systems for Public Health	3
PB HLTH C242C / STAT C247C	Longitudinal Data Analysis	4
	<a href="#">Course options in other departments*</a>	
<b>APE &amp; ILE courses</b>		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 299	Capstone Independent Study	1
<b>Electives</b>		
	<a href="#">Minimum of six credits from the HSB Electives course list*</a>	6

\* To assure that elective courses external to the school contain relevant public health content to warrant counting toward MPH requirements, the Community Health Sciences Division Head and HSB faculty review syllabi to confirm that the course covers MPH foundational and/or HSB concentration competencies.

**The Division of Health Policy and Management offers the MPH degree in Health Policy and Management through a two-year residential on-campus program, 11-month residential on-campus program, and on-campus/online program.**

To assure that courses external to the school contain sufficient relevant and robust content to warrant counting toward MPH requirements, the HPM Faculty Program Director has reviewed select syllabi to confirm that those courses cover content that complements or is aligned with MPH foundational and/or HPM concentration competencies in key related areas.

**Table D2.1.8 Requirements for two-year MPH Degree, Health Policy and Management**

Course number	Course name	Credits
<b>UC Berkeley School of Public Health Core Requirements</b>		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
<b>2-year HPM MPH Concentration Requirements</b>		
PB HLTH 223D	Foundations of Health Policy and Management	2
PB HLTH 231A	Analytic Methods for Health Policy and Management	3

Course number	Course name	Credits
<b>ECONOMICS CLUSTER (one of the following)</b>		
PB HLTH 226A	Health Economics	3
PB HLTH W226	Health Economics (online)	3
PB HLTH 226C	Economics of Population Health	3
PB HLTH W226C	Economics of Population Health (online)	3
<b>MANAGEMENT CLUSTER (Health Care Finance + one Strategy or Org Behavior)</b>		
PB HLTH 223C	Strategic Management and the Organization of Health Services	3
PB HLTH W223	Strategy in Healthcare Organizations (online)	3
PB HLTH 224A	Organizational Behavior and Management in Health Care	3
PB HLTH W224	Organizational Behavior and Management in Health Care (online)	3
PB HLTH W227A	Health Care Finance	3
<b>POLICY CLUSTER (one of the following)</b>		
PB HLTH 220	Health Policy Decision-Making	3
PB HLTH W220M	Health Policy Methods (online)	3
PB HLTH 220D	Health Policy Advocacy	3
PB HLTH 220E	Global Health Policy	3
PB HLTH 222A	Biomedical Innovation Policy	3
PB HLTH W222A	Biomedical Innovation Policy (online)	3
PB HLTH 271E	Science and Policy for Environment at Health	3
<b>APE &amp; ILE Courses</b>		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 223E	Capstone Seminar in Health Policy and Management	2
<b>Electives</b>		
	<i>Minimum total units of elective coursework</i>	15

**Table D2.1.9 Requirements for 11-Month MPH Degree, Health Policy and Management**

Course number	Course name	Credits
UC Berkeley School of Public Health Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
11-Month HPM MPH Concentration Requirements		
PB HLTH 223D	Foundations of Health Policy and Management	2
PB HLTH 231A	Analytic Methods for Health Policy and Management	3
<b>ECONOMICS CLUSTER (one of the following)</b>		
PB HLTH 226A	Health Economics	3
PB HLTH W226A	Health Economics (online)	3
PB HLTH 226C	Economics of Population Health	3
PB HLTH W226C	Economics of Population Health (online)	3
<b>MANAGEMENT CLUSTER (Health Care Finance + one Strategy or Org Behavior)</b>		
PB HLTH 223C	Strategic Management and the Organization of Health Services	3
PB HLTH W223	Strategy in Healthcare Organizations (online)	3
PB HLTH 224A	Organizational Behavior and Management in Health Care	3
PB HLTH W224	Organizational Behavior and Management in Health Care (online)	3
PB HLTH W227A	Health Care Finance	3
<b>POLICY CLUSTER (one of the following)</b>		
PB HLTH 220	Health Policy Decision-Making	3
PB HLTH W220M	Health Policy Methods (online)	3
PB HLTH 220D	Health Policy Advocacy	3
PB HLTH 220E	Global Health Policy	3
PB HLTH 222A	Biomedical Innovation Policy	3
PB HLTH W222A	Biomedical Innovation Policy (online)	3
PB HLTH 271E	Science and Policy for Environment at Health	3
APE & ILE Courses		
PB HLTH 299	Independent Research (Practicum)	2-4
PB HLTH 223E	Capstone Seminar in Health Policy and Management	2
Electives		
	<i>Minimum total units of elective coursework</i>	8-10

**Table D2.1.10 Requirements for Online MPH Degree, Health Policy and Management**

Course number	Course name	Credits
UC Berkeley School of Public Health Core Requirements		
PB HLTH W142	Introduction to Probability and Statistics	4
PB HLTH W200E	Health Policy and Management Breadth Course	2
PB HLTH W200F	Environmental Health Sciences Breadth Course	2
PB HLTH W200G	Health and Social Behavior Breadth Course	2
PB HLTH W250	Epidemiologic Methods I	3
PB HLTH W289	Interdisciplinary Seminar	3
Online HPM MPH Concentration Requirements		
<b>ECONOMICS CLUSTER (one of the following)</b>		
PB HLTH W226A	Health Economics	3
PB HLTH W226C	Economics of Population Health	3
<b>MANAGEMENT CLUSTER (all of the following)</b>		
PB HLTH W223	Strategy in Healthcare Organizations	3
PB HLTH W224	Organizational Behavior and Management in Health Care	3
PB HLTH W227A	Health Care Finance	3
<b>POLICY CLUSTER (one of the following)</b>		
PB HLTH W220M	Health Policy Methods	3
PB HLTH W222A	Biomedical Innovation Policy	3
Electives		
	<i>Minimum total units of elective coursework</i>	11

**The Division of Infectious Diseases and Vaccinology offers the MPH degree in Infectious Diseases and Vaccinology through a two-year residential on-campus program.**

If elective coursework is taken external to the school, to assure that the courses contain relevant public health content to warrant counting toward MPH requirements, the IDV Division Head and IDV faculty review syllabi to confirm that the course covers MPH foundational and/or IDV concentration competencies.

**Table D2.1.11 Requirements for MPH Degree, Infectious Diseases and Vaccinology**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
IDV MPH Concentration Requirements		
PB HLTH 260A	Principles of Infectious Disease	4
PB HLTH 263	Public Health Immunology	3
PB HLTH 266C	IDV Division Seminar: Hospital Associated Infections*	2
PB HLTH 253B	Epidemiology and Control of Infectious Diseases	3
<b>Advanced Courses - Electives (choose at least two of the following)</b>		
PB HLTH 236	U.S. Food and Drug Administration, Drug Development, and Public Health	2
PB HLTH 253B	Epidemiology and Control of Infectious Diseases	3
PB HLTH 260E	Molecular Epidemiology	2
PB HLTH 260F	Infectious Disease Research in Developing Countries	2
PB HLTH 262	Molecular Basis of Bacterial Pathogenesis	3
PB HLTH 265	Molecular Parasitology	3
PB HLTH 266B	Zoonotic Diseases	2
PB HLTH 290.11	Diagnostics in Infectious Diseases: Development and Regulatory Challenges	2
APE & ILE Courses		
PB HLTH 297	Public Health Field Study	3
PB HLTH 264	Capstone Seminar in Infectious Diseases	2
PB HLTH 299	Capstone Paper Mentorship with Faculty Advisor	2
Electives		
	<i>Minimum total units of elective coursework</i>	16

\* Substitution by another School of Public Health seminar related to Infectious Diseases may be acceptable

**The Division of Community Health Sciences offers the MPH degree in Maternal, Child, and Adolescent Health through a two-year residential on-campus program, 11-month residential on-campus program, and 4+1 BA/MPH program.**

If elective coursework is taken external to the school, to assure that the courses contain relevant public health content to warrant counting toward MPH requirements, the MCAH Faculty Program Director reviews syllabi to confirm that the course covers MPH foundational and/or MCAH concentration competencies.

**Table D2.1.12 Requirements for Two-Year MPH Degree, Maternal, Child, and Adolescent Health**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
2-year MCAH MPH Concentration Requirements		
PB HLTH 210	Foundations of MCH Policy, Practice, and Science	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 210J	Maternal, Child, and Adolescent Health Journal Club	2
PB HLTH 210K	Foundations of Maternal, Child, and Adolescent Health Leadership	2
PB HLTH 299	Independent Research	1+
<b>METHODS OF MEASUREMENT AND ANALYSIS (at least one of the following)</b>		
PB HLTH 241	Intermediate Biostatistics for Public Health	4
PB HLTH 242C	Longitudinal Data Analysis	4
PB HLTH 245	Introduction to Multivariate Statistics	4
<b>APPLIED PROGRAMMATIC SKILLS (at least one of the following)</b>		
PB HLTH 205	Needs Assessment & Program Planning	4
PB HLTH 218B	Evaluation of Health and Social Programs	4
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 299	Independent Research - Capstone Project	1+
Electives		
	<i>Minimum total units of elective coursework</i>	11*

\* 11 credits of electives if taking one unit of independent research

**Table D2.1.13 Requirements for 11-Month MPH Degree, Maternal, Child and Adolescent Health**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142*	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
11-Month MCAH MPH Concentration Requirements		
PB HLTH 205	Needs Assessment & Program Planning	4
PB HLTH 210	Foundations of MCH Policy, Practice & Science	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 210J	Maternal, Child, and Adolescent Health Journal Club	2
PB HLTH 245	Introduction to Multivariate Statistics	4
APE & ILE Courses		
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 299	Independent Research - Capstone Project*	1-5
Electives		
	<i>Minimum total units of elective coursework</i>	3-7

\* Students have the option to take variable independent research study units for their capstone project



**Table D2.1.14 Requirements for 4+1 MPH Degree, Maternal, Child, and Adolescent Health**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142*	Introduction to Probability and Statistics in Biology	4
PB HLTH 278	4+1 Seminar	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
4+1 MCAH MPH Concentration Requirements		
PB HLTH 210	Foundations of MCH Policy, Practice & Science	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 210J	Maternal, Child, and Adolescent Health Journal Club	2
<b>METHODS OF MEASUREMENT AND ANALYSIS (at least one of the following)</b>		
PB HLTH 241	Intermediate Biostatistics for Public Health	4
PB HLTH 242C	Longitudinal Data Analysis	4
PB HLTH 245	Introduction to Multivariate Statistics	4
<b>APPLIED PROGRAMMATIC SKILLS (at least one of the following)</b>		
PB HLTH 205	Needs Assessment & Program Planning	4
PB HLTH 218B	Evaluation of Health and Social Programs	4
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 299	Independent Research - Capstone Project	1+
Electives		
	<i>Minimum total units of elective coursework</i>	10

\* Students take PB HLTH 142: Introduction to Probability and Statistics in Biology as part of their undergraduate degree

**The Division of Community Health Sciences offers the MPH degree in Public Health Nutrition through a two-year residential on-campus program, 11-month residential on-campus program, and 4+1 BA/MPH program.**

If elective coursework is taken external to the school, to assure that the courses contain relevant public health content to warrant counting toward MPH requirements, PHN faculty review syllabi to confirm that the course covers MPH foundational and/or PHN concentration competencies.

**Table D2.1.15 Requirements for Two-Year MPH Degree, Public Health Nutrition**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
2-year PHN MPH Concentration Requirements		
PB HLTH 206	Critical Issues in Public Health Nutrition	2
PB HLTH 206C	Nutritional Epidemiology	3
<b>HUMAN NUTRITION (choose one)</b>		
PB HLTH W206A	Nutrition Assessment	3
PB HLTH 207A	Public Health Aspects of Maternal and Child Nutrition	3
<b>POLICY (choose one)</b>		
PB HLTH 206B	Food and Nutrition Policies and Programs	3
PB HLTH 206D	Food and Nutrition Programs and Policies in Developing Countries	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
Electives		
	<i>Minimum total units of elective coursework</i>	19

**Table D2.1.16 Requirements for 11-Month MPH Degree, Public Health Nutrition**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
11-Month PHN MPH Concentration Requirements		
PB HLTH 206	Critical Issues in Public Health Nutrition	2
PB HLTH 206C	Nutritional Epidemiology	3
PB HLTH 207A	Public Health Aspects of Maternal and Child Nutrition	3
PB HLTH 245	Introduction to Multivariate Statistics	4
APE & ILE Courses		
PB HLTH 206B	Food and Nutrition Policies and Programs	3
PB HLTH 205 OR PBHLTH 218B	Program Planning and Needs Assessment OR Evaluation in Health & Social Programs	4
Electives		
	<i>Minimum total units of elective coursework</i>	8

**Table D2.1.17 Requirements for Online MPH Degree, Public Health Nutrition**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH W142	Introduction to Probability and Statistics	4
PB HLTH W200E	Health Policy and Management Breadth Course	2
PB HLTH W200F	Environmental Health Sciences Breadth Course	2
PB HLTH W200G	Health and Social Behavior Breadth Course	2
PB HLTH W250	Epidemiologic Methods I	3
PB HLTH W289	Interdisciplinary Seminar	3
Online PHN MPH Concentration Requirements		
PB HLTH W205	Program Planning and Development	3
PB HLTH W206	Maternal and Child Health Nutrition	3
PB HLTH W206A	Nutrition Assessment	3
PB HLTH W206B	Food and Nutrition Policy	3
Electives		
	<i>Minimum total units of elective coursework</i>	14

**Table D2.1.18 Requirements for 4+1 MPH Degree, Public Health Nutrition**

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 278	4+1 Seminar	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 291A	Public Health Leadership	2
4+1 PHN MPH Concentration Requirements		
PB HLTH 205	Program Planning and Needs Assessment	4
PB HLTH 206	Critical Issues in Public Health Nutrition	2
PB HLTH 206B	Food and Nutrition Policies and Programs	3
PB HLTH 206C	Nutritional Epidemiology	3
PB HLTH 207A	Public Health Aspects of Maternal and Child Nutrition	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
Electives		
	<i>Minimum total units of elective coursework</i>	20

**Table D2.1.19 Requirements for 11-Month MPH Degree, Interdisciplinary MPH**

The Interdisciplinary MPH is an individualized concentration with individually defined learning goals. In addition to the required coursework, the adviser and student, together, are responsible for identifying elective courses to create appropriate curricular depth/expansion on foundational knowledge and skills according to the student's individual learning goals, and for defining a set of at least five competencies articulating the unique set of knowledge and skills that justifies awarding the Interdisciplinary MPH degree and differentiates the degree from other concentrations.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
<b>LEADERSHIP REQUIREMENT (one of the following)</b>		
PB HLTH 291A	Public Health Leadership	2
PB HLTH 223C	Strategic Management and the Health Sector	3
PB HLTH W289	Interdisciplinary Seminar	3
<b>BIOSTATISTICS REQUIREMENT (one of the following)</b>		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 252	Epidemiological Analysis	4
<b>EPIDEMIOLOGY REQUIREMENT (one of the following)</b>		
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 250B	Epidemiologic Methods II	4
11-Month Generalist MPH Concentration Requirements		
PB HLTH 292	Summer Interdisciplinary Seminar	1
PB HLTH 292	Fall Interdisciplinary Seminar	4
PB HLTH 292	Spring Interdisciplinary Seminar	4
Electives		
	<i>Minimum total units of elective coursework*</i>	18

\*If elective coursework is taken external to the school, to assure that the courses are contributing to achieve the students' individual learning goals and warrant counting toward completion of the MPH requirements, Interdisciplinary program faculty review syllabi to confirm that the course covers MPH foundational and/or Interdisciplinary MPH concentration competencies.

**Table D2.1.20 Requirements for Online MPH Degree, Interdisciplinary MPH**

The Interdisciplinary MPH is an individualized concentration with individually defined learning goals. All students complete the same required coursework to attain the foundational competencies plus select a program option in partnership with a faculty advisor. Our Interdisciplinary students create a customized course map that allows our students to select from course options mapped to concentration competencies and the option of a data visualization competency unique to our program to meet at least five concentration competencies. Further, our course mapping process is designed to maintain flexibility for students in planning when they take specific courses in their second year in order to tailor a course map that is aligned with the professional goals of a student community who aims to apply their learning in real time.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH W142	Introduction to Probability and Statistics	4
PB HLTH W200E	Health Policy and Management Breadth Course	3
PB HLTH W200F	Environmental Health Sciences Breadth Course	2
PB HLTH W200G	Health and Social Behavior Breadth Course	3
PB HLTH W250	Epidemiologic Methods I	3
PB HLTH W289	Interdisciplinary Seminar	3
Electives		
	<i>Minimum total units of elective coursework*</i>	24

\*If elective coursework is taken external to the school, to assure that the courses are contributing to achieve the students' individual learning goals and warrant counting toward completion of the MPH requirements, Interdisciplinary program faculty review syllabi to confirm that the course covers MPH foundational and/or Interdisciplinary MPH concentration competencies.

- (2) List the required curriculum for each combined degree option in the same format as above, clearly indicating (using italics or shading) any requirements that differ from MPH students who are not completing a combined degree.

**Table D2.2.1 Requirements for MPH/MBA Degree, Health Policy and Management Concentration**

The MPH/MBA concurrent degree is offered in partnership with the UC Berkeley Haas School of Business.

To assure that courses external to the school contain sufficient relevant and robust content to warrant counting toward MBA/MPH requirements, the HPM Faculty Program Director has reviewed select syllabi to confirm that those courses cover content that complements or is aligned with MPH foundational and/or HPM concentration competencies in key related areas.

Course number	Course name	Credits
UC Berkeley School of Public Health Core Requirements		
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
UC Berkeley Haas School of Business Core Requirements		
MBA 200S	Data and Decisions	2
MBA 201A	Economics for Business Decision Making	2
MBA 202	Financial Accounting	2
MBA 203	Introduction to Finance	2
MBA 206	Marketing Management	2
MBA 200A	Data Analytics	2
MBA 207	Ethics and Responsibility in Business	1
MBA 200D	Data Driven Presentations	1
MBA 299	Strategic Leadership	2
MPH/MBA HPM Concentration Requirements		
PB HLTH 290	Health Policy and Management in Public Health	1
MBA 297A / PB HLTH 223A	Healthcare in the 21st Century	3
<b>ECONOMICS CLUSTER (one of the following)</b>		
PB HLTH 226A	Health Economics A	3
PB HLTH W226A	Health Economics (online)	3
PB HLTH 226C	Economics of Population Health	3
PB HLTH W226C	Economics of Population Health (online)	3
<b>MANAGEMENT CLUSTER (one Strategy or Org Behavior)</b>		
PB HLTH 223C	Strategic Management and the Organization of Health Services	3

Course number	Course name	Credits
PB HLTH W223	Strategy in Healthcare Organizations (online)	3
PB HLTH 224A	Organizational Behavior and Management in Health Care	3
PB HLTH W224	Organizational Behavior and Management in Health Care (online)	3
<b>POLICY CLUSTER (one of the following)</b>		
PB HLTH 220	Health Policy Decision-Making	3
PB HLTH W220M	Health Policy Methods (online)	3
PB HLTH 220D	Health Policy Advocacy	3
PB HLTH 220E	Global Health Policy	3
PB HLTH 222A	Biomedical Innovation Policy	3
PB HLTH W222A	Biomedical Innovation Policy (online)	3
PB HLTH 271E	Science and Policy for Environment at Health	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 223E	Capstone Seminar in Health Policy and Management	2
Electives		
	<i>Minimum total units of elective coursework</i>	7



**Table D2.2.2 Requirements for MPH/MPP Degree, Health Policy and Management Concentration**

The MPH/MPP concurrent degree is offered in partnership with the UC Berkeley Goldman School of Public Policy.

To assure that courses external to the school contain sufficient relevant and robust content to warrant counting toward MPP/MPH requirements, the HPM Faculty Program Director has reviewed select syllabi to confirm that those courses cover content that complements or is aligned with MPH foundational and/or HPM concentration competencies in key related areas.

Course number	Course name	Credits
UC Berkeley School of Public Health Core Requirements		
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
UC Berkeley Goldman School of Public Policy Core Requirements		
PP 200A	Foundations for Public Policy Analysis	3
PP 210A	The Economics of Public Policy Analysis	4
PP 210B	The Economics of Public Policy Analysis	4
PP 240A	Decision Analysis, Modeling and Quantitative Methods	4
PP 240B	Decision Analysis, Modeling and Quantitative Methods	4
PP 205	Advanced Policy Analysis (Thesis Seminar)	6
MPH/MPP HPM Concentration Requirements		
PB HLTH 223D	Foundations of Health Policy and Management	2
<b>ECONOMICS CLUSTER (one of the following)</b>		
PB HLTH 226A	Health Economics A	3
PB HLTH W226A	Health Economics (online)	3
PB HLTH 226C	Economics of Population Health	3
PB HLTH W226C	Economics of Population Health (online)	3
<b>MANAGEMENT CLUSTER (Health Care Finance + one Strategy or Org Behavior)</b>		
PB HLTH 223C	Strategic Management and the Organization of Health Services	3
PB HLTH W223	Strategy in Healthcare Organizations (online)	3
PB HLTH 224A	Organizational Behavior and Management in Health Care	3
PB HLTH W224	Organizational Behavior and Management in Health Care (online)	3
PB HLTH W227A	Health Care Finance (online)	3
<b>POLICY CLUSTER (one of the following)</b>		
PB HLTH 220	Health Policy Decision-Making	3
PB HLTH W220M	Health Policy Methods (online)	3

Course number	Course name	Credits
PB HLTH 220D	Health Policy Advocacy	3
PB HLTH 220E	Global Health Policy	3
PB HLTH 222A	Biomedical Innovation Policy	3
PB HLTH W222A	Biomedical Innovation Policy (online)	3
PB HLTH 271E	Science and Policy for Environment at Health	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
Electives		
	<i>Minimum total units of elective coursework</i>	12

**Table D2.2.3 Requirements for MPH/MSW Degree, Health and Social Behavior Concentration**

The MPH/MSW concurrent degree is offered in partnership with the UC Berkeley School of Social Welfare. HSB and MCAH are available concentrations for this concurrent degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
MPH/MSW HSB Concentration Requirements		
PB HLTH 203A	Theories of Health and Social Behavior	3
PB HLTH 292.001	MPH Seminar: Introduction to HSB	2
PB HLTH 292.002	Capstone Course in HSB	1-4
PB HLTH 205*	Program Planning & Needs Assessment	4
PB HLTH 218B**	Evaluation of Health and Social Programs	4
PB HLTH 202B	Ethnic and Cultural Diversity in Health Status	4
PB HLTH 204G	Research Advances in Health Disparities	1-3
PB HLTH 255A	Social Epidemiology	4
PB HLTH 290	Structural Competency: A New Medicine for the Inequalities that Make Us Sick (fall)	3
PB HLTH 290	Human Reproductive and Genetic Technologies: Social, Ethical, and Legal Implications (spring)	1-4
PB HLTH 290	Bioethics: From Nuremberg to Modern Times (spring)	1-4

Course number	Course name	Credits
<b>RESEARCH METHODS REQUIREMENT (at least one of the following)</b>		
PB HLTH 219C	Community-Based Participatory Research	3-4
PB HLTH 219E	Introduction to Qualitative Methods (spring, every year)	3
PB HLTH 241	Statistical Analysis of Categorical Data	4
PB HLTH 255D	Methods in Social Epidemiology	2
PB HLTH W272A	Introduction to Geographic Information Systems for Public Health	3
PB HLTH C242C / STAT C247C	Longitudinal Data Analysis	4
	<a href="#">Course options in other departments</a> ***	
APE & ILE courses (as applicable)		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 299	Capstone Independent Study	1
HSB Electives (6 units) OR 3 units HSB Elective & 3 units with MSW		
<i>Minimum total units of elective coursework from <a href="#">HSB Electives course list</a>***</i>		3-6
<i>Minimum total units of elective coursework from School of Social Welfare</i>		0-3

\*Can be substituted with SOCWEL251: Program Development (2 units)

\*\*Can be substituted with PB HLTH W218: Evaluation of Health and Social Programs (3 units)

\*\*\*To assure that elective courses external to the school contain relevant public health content to warrant counting toward MPH requirements, the Community Health Sciences Division Head and HSB faculty review syllabi to confirm that the course covers MPH foundational and/or HSB concentration competencies.

**Table D2.2.4 Requirements for MPH/MSW Degree, Maternal Child and Adolescent Health Concentration**

The MPH/MSW concurrent degree is offered in partnership with the UC Berkeley School of Social Welfare. HSB and MCAH are available concentrations for this concurrent degree. Requirements for the MPH/MSW degree in the MCAH concentration are similar as for students with an MCAH concentration not completing a combined degree, except there is no Methods of Measurement and Analysis requirement.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
MPH/MSW MCAH Concentration Requirements		
PB HLTH 210	Foundations of MCH Policy, Practice & Science	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 210J	Maternal, Child, and Adolescent Health Journal Club	2
PB HLTH 210K	Foundations of Maternal, Child, and Adolescent Health Leadership	2
<b>APPLIED PROGRAMMATIC SKILLS (at least one of the following)</b>		
PB HLTH 205	Needs Assessment & Program Planning	4
PB HLTH 218B	Evaluation of Health and Social Programs	4
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 210E	Practicum in MCH Data Analysis I	3
PB HLTH 210F	Practicum in MCH Data Analysis II	3
PB HLTH 299	Independent Research	1+
Electives		
	<i>Minimum total units of elective coursework*</i>	10

\*If elective coursework is taken external to the school, to assure that the courses contain relevant public health content to warrant counting toward MPH requirements, the MCAH Faculty Program Director reviews syllabi to confirm that the course covers MPH foundational and/or MCAH concentration competencies.

**Table D2.2.5 Requirements for MPH/MCP Degree, Health and Social Behavior Concentration**

The MPH/MCP concurrent degree is offered in partnership with the UC Berkeley College of Environmental Design. HSB, EHS, and GHE are available concentrations for this concurrent degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142*	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
MPH/MCP HSB Concentration Requirements		
PB HLTH 203A	Theories of Health and Social Behavior	3
PB HLTH 292.001	MPH Seminar: Introduction to HSB	2
PB HLTH 292.002	Capstone Course in HSB	1-4
PB HLTH 205	Program Planning & Needs Assessment	4
PB HLTH 218B	Evaluation of Health and Social Programs	4
<b>HEALTH, RACE, AND SOCIAL EQUITY REQUIREMENT (at least one of the following)</b>		
PB HLTH 202B	Ethnic and Cultural Diversity in Health Status	4
PB HLTH 204G	Research Advances in Health Disparities	1-3
PB HLTH 255A	Social Epidemiology	4
PB HLTH 290	Structural Competency: A New Medicine for the Inequalities that Make Us Sick (fall)	3
PB HLTH 290	Human Reproductive and Genetic Technologies: Social, Ethical, and Legal Implications (spring)	1-4
PB HLTH 290	Bioethics: From Nuremberg to Modern Times (spring)	1-4
<b>RESEARCH METHODS REQUIREMENT (at least one of the following)</b>		
PB HLTH 219C	Community-Based Participatory Research	3-4
PB HLTH 219E	Introduction to Qualitative Methods (spring, every year)	3
PB HLTH 241	Statistical Analysis of Categorical Data	4
PB HLTH 255D	Methods in Social Epidemiology	2
PB HLTH W272A	Introduction to Geographic Information Systems for Public Health	3
PB HLTH C242C / STAT C247C	Longitudinal Data Analysis	4
	<a href="#">Course options in other departments**</a>	
APE & ILE courses		
PB HLTH 297	Public Health Field Placement	3

Course number	Course name	Credits
PB HLTH 299	Capstone Independent Study	1
Electives		
Minimum total units of elective coursework from <a href="#">HSB Electives course list</a> **		6
Minimum total units of BPH elective coursework		2

\*Can be substituted with CYPLAN 201A: Planning Methods I (4 units) and CYPLAN 201B: Planning Methods II (4 units)

\*\*To assure that elective courses external to the school contain relevant public health content to warrant counting toward MPH requirements, the Community Health Sciences Division Head and HSB faculty review syllabi to confirm that the course covers MPH foundational and/or HSB concentration competencies.

#### Table D2.2.6 Requirements for MPH/MCP Degree, Environmental Health Sciences Concentration

The MPH/MCP concurrent degree is offered in partnership with the UC Berkeley College of Environmental Design. HSB, EHS, and GHE are available concentrations for this concurrent degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
MPH/MCP EHS Concentration Requirements		
PB HLTH 270	Introduction to Environmental Health Sciences	3
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 270B/NUSCTX 110*	Toxicology I	4
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 271E	Science and Policy for Environmental Health	3
PB HLTH 292	EHS Masters Seminar (Career Pathways )	1
<b>One of the following:</b>		
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 241	Statistical Analysis of Categorical Data	4
<b>At least one of the following:</b>		
PB HLTH C256	Human Genome, Environment, & Public Health	4
PB HLTH 270C	Practical Toxicology	2
PB HLTH 273	Environmental Determinants of Infectious Disease	3
PB HLTH 254	Occupational and Environmental Epidemiology	3

Course number	Course name	Credits
PB HLTH W272A	Introduction to GIS in Public Health	3
PB HLTH W272C	Applied Spatial Data Science for Public Health	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 292	EHS Masters Seminar - fall (capstone preparation)	3
PB HLTH 292	EHS Masters Seminar - spring (capstone)	2
Electives		
	<i>Minimum total units of elective coursework**</i>	2-4

\* PB HLTH 270B: Toxicology I is in the process of being redesigned

\*\* Program faculty directors request and review course syllabi and reading lists for electives outside the School of Public Health every two years to ensure the courses contain relevant public health content to warrant counting toward MPH requirements. Course instructors are contacted to discuss courses for which the degree and depth of coverage of public health content cannot be discerned through reviewing syllabi and reading lists.

**Table D2.2.7 Requirements for MPH/MJ Degree, Health and Social Behavior Concentration**

The MPH/MJ concurrent degree is offered in partnership with the UC Berkeley Graduate School of Journalism. HSB, EHS, Epidemiology/Biostatistics, and IDV are available concentrations for this concurrent degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
MPH/MJ HSB Concentration Requirements		
PB HLTH 203A	Theories of Health and Social Behavior	3
PB HLTH 292.001	MPH Seminar: Introduction to HSB	2
PB HLTH 292.002	Capstone Course in HSB	1-4
PB HLTH 205	Program Planning & Needs Assessment	4
PB HLTH 218B	Evaluation of Health and Social Programs	4
<b>HEALTH, RACE, AND SOCIAL EQUITY REQUIREMENT (at least one of the following)</b>		
PB HLTH 202B	Ethnic and Cultural Diversity in Health Status	4
PB HLTH 204G	Research Advances in Health Disparities	1-3
PB HLTH 255A	Social Epidemiology	4
PB HLTH 290	Structural Competency: A New Medicine for the Inequalities that Make Us Sick (fall)	3
PB HLTH 290	Human Reproductive and Genetic Technologies: Social, Ethical, and Legal Implications (spring)	1-4
PB HLTH 290	Bioethics: From Nuremberg to Modern Times (spring)	1-4
<b>RESEARCH METHODS REQUIREMENT (at least one of the following)</b>		
PB HLTH 219C	Community-Based Participatory Research	3-4
PB HLTH 219E	Introduction to Qualitative Methods (spring, every year)	3
PB HLTH 241	Statistical Analysis of Categorical Data	4
PB HLTH 255D	Methods in Social Epidemiology	2
PB HLTH W272A	Introduction to Geographic Information Systems for Public Health	3
PB HLTH C242C / STAT C247C	Longitudinal Data Analysis	4
	<a href="#">Course options in other departments*</a>	



Course number	Course name	Credits
APE & ILE courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 299	Capstone Independent Study	1
Electives		
Minimum total units of elective coursework from <a href="#">HSB Electives course list</a> *		6
Minimum total units of BPH elective coursework		2

\* To assure that elective courses external to the school contain relevant public health content to warrant counting toward MPH requirements, the Community Health Sciences Division Head and HSB faculty review syllabi to confirm that the course covers MPH foundational and/or HSB concentration competencies.

#### Table D2.2.8 Requirements for MPH/MJ Degree, Environmental Health Sciences Concentration

The MPH/MJ concurrent degree is offered in partnership with the UC Berkeley Graduate School of Journalism. HSB, EHS, Epidemiology/Biostatistics, and IDV are available concentrations for this concurrent degree. Requirements for the MPH/MJ degree in the EHS concentration are the same as for students with an EHS concentration not completing a combined degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
MPH/MJ EHS Concentration Requirements		
PB HLTH 270	Introduction to Environmental Health Sciences	3
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 270B/NUSCTX 110*	Toxicology I	4
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 271E	Science and Policy for Environmental Health	3
PB HLTH 292	EHS Masters Seminar (Career Pathways )	1
<b>One of the following:</b>		
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 241	Statistical Analysis of Categorical Data	4
<b>At least one of the following:</b>		
PB HLTH C256	Human Genome, Environment, & Public Health	4
PB HLTH 270C	Practical Toxicology	2

Course number	Course name	Credits
PB HLTH 273	Environmental Determinants of Infectious Disease	3
PB HLTH 254	Occupational and Environmental Epidemiology	3
PB HLTH W272A	Introduction to GIS in Public Health	3
PB HLTH W272C	Applied Spatial Data Science for Public Health	3
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 292	EHS Masters Seminar - fall (capstone preparation)	3
PB HLTH 292	EHS Masters Seminar - spring (capstone)	2
Electives		
	<i>Minimum total units of elective coursework**</i>	2-4

\* PB HLTH 270B: Toxicology I is in the process of being redesigned

\*\* Program faculty directors request and review course syllabi and reading lists for electives outside the School of Public Health every two years to ensure the courses contain relevant public health content to warrant counting toward MPH requirements. Course instructors are contacted to discuss courses for which the degree and depth of coverage of public health content cannot be discerned through reviewing syllabi and reading lists.

**Table D2.2.9 Requirements for MPH/MJ Degree, Epidemiology/Biostatistics Concentration**

The MPH/MJ concurrent degree is offered in partnership with the UC Berkeley Graduate School of Journalism. HSB, EHS, Epidemiology/Biostatistics, and IDV are available concentrations for this concurrent degree. Requirements for the MPH/MJ degree in the Epi/Bio concentration are the same as for students with an Epi/Bio concentration not completing a combined degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142 or PB HLTH 245*	Introduction to Probability and Statistics in Biology or Introduction to Multivariate Statistics	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A or PB HLTH W250	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
2-year EPI/BIO MPH Concentration Requirements		
PB HLTH 241 or PB HLTH W241	Intermediate Biostatistics for Public Health	4
PB HLTH 250B or PB HLTH W250B	Epidemiologic Methods II	4
PB HLTH 252 or PB HLTH W252	Epidemiological Analysis	4
PB HLTH 271K	Introduction to Data Management and Programming in SAS for Public Health	2
APE & ILE Courses		
PB HLTH 297	Public Health Field Placement	3
PB HLTH 292	Epi/Bio Seminar for Epi/Bio students (1st Semester)	2
PB HLTH 292	Capstone Research Seminar (3rd Semester)	2
PB HLTH 292	Capstone Presentation Seminar (4th Semester)	2
Electives		
	<i>Minimum total units of elective coursework**</i>	11 - 14

\* Students take PB HLTH 142 if no previous coursework in statistics, otherwise they may enroll in PB HLTH 245

\*\* To assure that elective courses external to the school contain relevant public health content to warrant counting toward MPH requirements, faculty review syllabi to confirm that the course covers MPH foundational and/or concentration competencies. The program maintains a list of recommended electives in student handbooks that are pre-vetted by faculty as well as recommended certificate programs (e.g. Applied Data Science, Food Systems) and designated emphases (e.g. Computational Precision Health, Computational Biology) that are pre-approved.

**Table D2.2.10 Requirements for MPH/MJ Degree, Infectious Diseases and Vaccinology Concentration**

The MPH/MJ concurrent degree is offered in partnership with the UC Berkeley Graduate School of Journalism. HSB, EHS, Epidemiology/Biostatistics, and IDV are available concentrations for this concurrent degree. Requirements for the MPH/MJ degree in the IDV concentration are the same as for students with an IDV concentration not completing a combined degree.

Course number	Course name	Credits
UC Berkeley School of Public Health - Core Requirements		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200J	Health Policy and Management Breadth Course	2
PB HLTH 200K	Environmental Health Sciences Breadth Course	2
PB HLTH 200L	Health and Social Behavior Breadth Course	2
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 291A	Public Health Leadership	2
IDV MPH Concentration Requirements		
PB HLTH 260A	Principles of Infectious Disease	4
PB HLTH 263	Public Health Immunology	3
PB HLTH 266C	IDV Division Seminar: Hospital Associated Infections*	2
PB HLTH 253B	Epidemiology and Control of Infectious Diseases	3
<b>Advanced Courses - Electives (choose at least two of the following)</b>		
PB HLTH 236	U.S. Food and Drug Administration, Drug Development, and Public Health	2
PB HLTH 253B	Epidemiology and Control of Infectious Diseases	3
PB HLTH 260E	Molecular Epidemiology	2
PB HLTH 260F	Infectious Disease Research in Developing Countries	2
PB HLTH 262	Molecular Basis of Bacterial Pathogenesis	3
PB HLTH 265	Molecular Parasitology	3
PB HLTH 266B	Zoonotic Diseases	2
PB HLTH 290.11	Diagnostics in Infectious Diseases: Development and Regulatory Challenges	2
APE & ILE Courses		
PB HLTH 297	Public Health Field Study	3
PB HLTH 264	Capstone Seminar in Infectious Diseases	2
PB HLTH 299	Capstone Paper Mentorship with Faculty Advisor	2
Electives		
	<i>Minimum total units of elective coursework**</i>	16

\* Substitution by another School of Public Health seminar related to Infectious Diseases may be acceptable as IDV Division Seminar

**\*\*** If elective coursework is taken external to the school, to assure that the courses contain relevant public health content to warrant counting toward MPH requirements, the IDV Division Head and IDV faculty review syllabi to confirm that the course covers MPH foundational and/or IDV concentration competencies.

- (3) Provide a matrix, in the format of Template D2-2, that indicates the assessment activity for each of the foundational competencies listed above (1-22). If the school or program addresses all of the listed foundational competencies in a single, common core curriculum, the school or program need only present a single matrix. If combined degree students do not complete the same core curriculum as students in the standalone MPH program, the school or program must present a separate matrix for each combined degree. If the school or program relies on concentration-specific courses to assess some of the foundational competencies listed above, the school or program must present a separate matrix for each concentration.

Table D2.3.1 Assessment of Competencies for MPH

Competency	Course	Describe specific assessment opportunity
<b>Evidence-based Approaches to Public Health</b>		
1. Apply epidemiological methods to settings and situations in public health practice	<b>PB HLTH 250A: Epidemiologic Methods I (residential: all except 4+1)</b>	<b>Final Exam:</b> Final take-home exam whereby students demonstrate ability to describe the epidemiologic approach to causal inference, including the concept of counterfactuals (Part I, Question 2-3; Part II, Question 2; Part III, Question 7); calculate, interpret, and identify measures of disease frequency and association (Part III, Questions 8A-B); assess the magnitude and presence of bias (Part I, Questions 4A-E; Part II, Questions 3A-B), assess confounding and effect measure modification (Part II, Questions 4A-F, 5), and identify appropriate study designs for a epidemiologic research question and context (Part III, Questions 2-5).
	<b>PB HLTH 250B: Epidemiologic Methods II (4+1)</b>	<b>Exam 2 - Questions 4 and 8:</b> Lecture, labs, and readings leading up to Exam 2 cover study design and biases.
	<b>PB HLTH W250: Epidemiologic Methods I (online)</b>	<b>Midterm Exam - Question 1:</b> Students demonstrate ability to describe the epidemiologic approach to causal inference, including the concept of counterfactuals, to calculate and interpret measures of disease frequency and association, and to identify appropriate study designs and applications of measures of disease frequency and association.
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	<b>Quantitative data PB HLTH 250A: Epidemiologic Methods I (residential: all except 4+1)</b>	<b>Final Exam:</b> Final take-home exam whereby students demonstrate ability to identify appropriate study designs for an epidemiologic research question and context (Part III, Questions 2-5) and select and interpret appropriate quantitative methods for a given context (Part I, Questions 5B-C; Part III, Questions 8A-F).
	<b>Quantitative data PB HLTH W250: Epidemiologic Methods I (online)</b>	<b>Final Exam - Questions 4.11-4.13 and 5:</b> Students demonstrate ability to select appropriate epidemiologic study designs with their quantitative data collection methods for a given research question and context in the final exam.

Competency	Course	Describe specific assessment opportunity
	<b>Quantitative data</b> <b>PB HLTH 250B:</b> <b>Epidemiologic</b> <b>Methods II (4+1)</b>	<b>Exam 3 - Question 4:</b> Lecture, labs, and readings leading up to Exam 3 cover effect modification, matching, screening, power and statistical inference, analyzing epi data, and meta analysis/systematic reviews.
	<b>Qualitative data</b> <b>Leadership course</b> <b>TBD (residential:</b> <b>all except 2-Year</b> <b>HPM MPH,</b> <b>11-Month HPM</b> <b>MPH, MPP/MPH,</b> <b>MBA/MPH)</b>	A new leadership course starting in Fall 2023 will address strategic analysis of data.
	<b>Qualitative data</b> <b>PB HLTH 224A:</b> <b>Organizational</b> <b>Behavior and</b> <b>Management in</b> <b>Health Care</b> <b>(2-Year HPM MPH,</b> <b>11-Month HPM</b> <b>MPH, MPP/MPH,</b> <b>MBA/MPH</b> <b>selective)</b>	<b>Team Video Project Workbook - Weeks 6 and 7:</b> Students learn how to select performance improvement tools, including "voice of the customer," Five Whys technique, fishbone (Ishakwa diagrams), change impact assessment, stakeholder assessment, and communication plan templates, which are developed by analyzing qualitative observations presented in the team project case study. Students are assessed through their selection of an appropriate qualitative assessment tool as an interim milestone as part of their team project.
	<b>Qualitative data</b> <b>PB HLTH 223C:</b> <b>Strategic</b> <b>Management in the</b> <b>Health Sector</b> <b>(2-Year HPM MPH,</b> <b>11-Month HPM</b> <b>MPH, MPP/MPH,</b> <b>MBA/MPH</b> <b>selective)</b>	<b>Midterm Exam - Question 3:</b> The midterm exam assesses students on strategic analysis and the use of both quantitative and qualitative data as part of making evaluative judgements about what will be the best course of action.
	<b>Qualitative data</b> <b>PB HLTH W289:</b> <b>Interdisciplinary</b> <b>Seminar (online)</b>	<b>Week 7 Quiz:</b> In Week 7, Session 1: Approaches and Selection of Qualitative Methods, students learn to describe common qualitative data methods and approaches used in public health, identify how to select qualitative methods for a given public health context, and apply qualitative method selection to a public health community program. Students are assessed through a quiz.

Competency	Course	Describe specific assessment opportunity
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	<b>Quantitative data</b> <b>PB HLTH 142: Introduction to Probability and Statistics</b> <b>(residential: all except MCP/MPH, 4+1)</b>	<b>Data Project Parts I-III:</b> Students find data that is related to health, public health, biology, sociology, demography, justice, or another topic affiliated with public health or biology. Students will then import data into R and use this data set to demonstrate concepts covered in class: Part I - Collecting, Exploring, and Visualizing Data; Part II - Demonstrating your data skills; Part III - Statistical Inference. Students will work in groups and, as part of Data Project Part III, prepare a statement indicating the contributions of each group member.
	<b>Quantitative data</b> <b>CYPLAN 201A: Planning Methods Gateway</b> <b>(MCP/MPH)</b>  <b>CYPLAN 201B: Planning Methods Gateway Part 2</b> <b>(MCP/MPH)</b>	<b>CYPLAN 201A: Assignment 5: Working with Disaggregate Data :</b> Students use disaggregate data and test a research hypothesis using the correct statistical test. The goal of this assignment is to practice working with a large dataset, recoding variables, and conducting and interpreting statistical output. Students turn in a data brief (no more than one- to two-pages) that includes the following: 1)The research question 2) The research hypothesis 3) Methods section 4) Data analysis 5) Conclusion.  <b>CYPLAN 201B: Assignment 1: Regression Analysis Report:</b> Students use regression analysis to assess the impact of an intervention or “planning factor” on person or household level outcomes. Students have the option of answering one of the three questions specified in the assignment prompt or selecting their own data and research question.
	<b>Quantitative data</b> <b>PB HLTH 241: Intermediate Biostatistics for Public Health</b> <b>(4+1)</b>	<b>Assignment 4:</b> Students use statistical software to analyze data sets.
	<b>Quantitative data</b> <b>PB HLTH W142: Introduction to Probability and Statistics</b> <b>(online)</b>	<b>Week 10 Problem Set:</b> Students use statistical software to analyze data sets.
	<b>Qualitative data</b> <b>Leadership course</b> <b>TBD (residential: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	A new leadership course starting in Fall 2023 will address strategic analysis of data.



Competency	Course	Describe specific assessment opportunity
	<b>Qualitative data PB HLTH 224A: Organizational Behavior and Management in Health Care (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Team Video Project Workbook - Weeks 6 and 7:</b> Students learn how to select performance improvement tools, including "voice of the customer," Five Whys technique, fishbone (Ishakwa diagrams), change impact assessment, stakeholder assessment, and communication plan templates, which are developed by analyzing qualitative observations presented in the team project case study. Students are assessed through their selection of an appropriate qualitative assessment tool as an interim milestone as part of their team project.
	<b>Qualitative data PB HLTH 223C: Strategic Management in the Health Sector (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Group Strategy Project:</b> Students will work in teams of four to six students on a live client project, tracking to a strategic deliverable that fits their organization's specific prompt. These will span different parts of the overall cycle and range from strategy development, evaluation or some aspect of implementation, monitoring and can be more qualitative or quantitative in nature. Students will: <ul style="list-style-type: none"> <li>• Engage with the client</li> <li>• Initially create both a collaborative plan &amp; project description/scope</li> <li>• Learn about the organization, the current issue/opportunity</li> <li>• Conduct a SWOT and/or PEST analysis (submit to faculty)</li> <li>• Perform other analytics as needed using qualitative and quantitative data</li> <li>• Create recommendations that reflect a guided decision-making</li> <li>• Consider the most appropriate communication strategy/framing for your recommendations</li> <li>• Identify key stakeholders/axis of influence</li> </ul> Teams will memorialize their analysis and recommendations in a PowerPoint presentation that they will present in class and take place during the last two sessions. The Final Group project includes a student self and team assessment of performance.
	<b>Qualitative data PB HLTH W289: Interdisciplinary Seminar (online)</b>	<b>Week 7 Quiz:</b> In Week 7, Session 2: Analysis and Interpretation of Qualitative Data, students learn to identify qualitative data analysis steps and software and understand the rationale for mixed methods approaches in public health community research, including participatory approaches. Students will be assessed through a quiz.

Competency	Course	Describe specific assessment opportunity
4. Interpret results of data analysis for public health research, policy or practice	<b>PB HLTH 142: Introduction to Probability and Statistics</b> (residential: all except MCP/MPH, 4+1)	<b>Data Project Parts I-III:</b> Students find data that is related to health, public health, biology, sociology, demography, justice, or another topic affiliated with public health or biology. Students will then import data into R and use this data set to demonstrate concepts covered in class: Part I - Collecting, Exploring, and Visualizing Data; Part II - Demonstrating your data skills; Part III - Statistical Inference. In Data Project Part I, students discuss how existing data/studies suggest the problem addressed with the data might be important, how the findings might make an impact, how the findings might be used, or why students are personally interested in this question. In Data Project Part III, students interpret findings and discuss methods used to collect the data you analyzed, potential issues in how the participants were selected, recruited, retained, or assessed that may have impacted the outcome of your analysis/visualization, and potential biases for concern. Students will work in groups and, as part of Data Project Part III, prepare a statement indicating the contributions of each group member.

Competency	Course	Describe specific assessment opportunity
	<p><b>CYPLAN 201A: Planning Methods Gateway (MCP/MPH)</b></p> <p><b>CYPLAN 201B: Planning Methods Gateway Part 2 (MCP/MPH)</b></p>	<p><b>CYPLAN 201A Final Case Study Assignment:</b> The final assignment consists of two key deliverables: 1) A poster presentation 2) A 10-12-page memo (including charts/graphs/maps) that addresses a specific planning problem or issue in the student's case study neighborhood. The goal of the final assignment is to take what the student learned over the course of the semester to synthesize available data related to a planning issue confronting the student's case study neighborhood and to effectively present the data in maps, charts, and tables as well as through carefully constructed narrative writing. Students do not need to “answer” a definitive research question in this project; rather, students are providing guidance on a planning problem or issue by providing critical context and illustrative or descriptive statistics that can inform subsequent research and/or data collection.</p> <p><b>CYPLAN 201B Assignment 3: Next Steps in GIS and Spatial Analysis:</b> For this assignment, students have two options. The first assignment option emphasizes technical GIS skills, and will require that the student demonstrates familiarity with some key concepts in GIS: geocoding address-level data, carrying out spatial joins and joins by attributes, and measures of accessibility (using both “counts” within buffers and nearest neighbor analysis at the address level). This option will be the focus of lab sessions. The second assignment option emphasizes critical thinking skills related to layering various data values to create a neighborhood index, and introduces a new statistical concept called principal component and factor analysis. This option is designed for students who already have strong GIS skills and want to expand their statistical toolkit. For both options, students turn in a report that includes effective visualizations of the data, drawing on principles from last semester regarding data visualization, professional presentation, and clear and effective writing.</p>
	<b>PB HLTH 241: Intermediate Biostatistics for Public Health (4+1)</b>	<b>Assignment 12:</b> Students are assessed on their ability to interpret the results of statistical analyses found in public health studies.
	<b>PB HLTH W142: Introduction to Probability and Statistics (online)</b>	<b>Journal Club #1 Discussion Questions:</b> Students are assessed on their ability to interpret the results of statistical analyses found in public health studies.

Competency	Course	Describe specific assessment opportunity
<b>Public Health &amp; Health Care Systems</b>		
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings	<b>PB HLTH 200J: Health Policy and Management Breadth</b> (residential: all except 4+1, 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)	<b>Weeks 7 and 8 Quizzes:</b> Module 2 covers health policy, specifically US health policy in Week 6, US health policy reform in Week 7, and global health policy and reform in Week 8. Quizzes assess students' understanding of the organization, structure, and function of health care, public health, and regulatory systems.
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Quiz - Comparative Health Systems:</b> Week 5 lecture covers comparative health systems. The quiz tests student understanding of different health care delivery systems across developed countries.
	<b>PB HLTH W200E: Introduction to Health Policy and Management (online)</b>	<b>Midterm Exam:</b> Weeks 2-3 cover health policy, health financing, and universal coverage. The midterm exam after Week 3 assesses students' understanding of the organization, structure, and function of health care, public health, and regulatory systems.
	<b>PB HLTH 290: HPM in Public Health (MBA/MPH)</b>	<b>Exercise 1:</b> Area 2 covers organization and structure of elements of country-level health systems, and compares key dimensions of different domestic and international health systems. For Exercise 1, students use the Commonwealth Fund report to select two countries of interest and compare five to seven specific indicators to highlight the key structural and organizational similarities & differences between the two systems addressing the following questions: Why did they pick those indicators over others? Which country offers better outcomes for individuals overall, vulnerable populations, the system? Are there key facets of one or both systems that would be useful and feasible for the U.S. to consider in improving its performance on some key indicators?

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 223D: Foundations of Health Policy and Management</b> (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH)	<b>Midterm Exam Questions 5, 7, 8:</b> The midterm exam covers the first six weeks of course material, including the organization, structure and function of health care, public health and regulatory systems in the U.S. In-class discussion on comparative health system performance requires students to compare and contrast health system financing and delivery systems across international settings.
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and systemic levels	<b>PB HLTH 200L: Health and Social Behavior</b> (residential: all except HSB MPH)	<b>Paper 1:</b> Week 2 lecture, in-class discussion, and readings focus on the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels. In Paper 1, students present a public health intervention for a public health challenge of their choice and describe the social determinants of health that likely contribute to this specific health issue and whether there are any health disparities within the community. Paper 1 is a group project; peer evaluations will need to be completed for each group member at time of submission for Paper 1.
	<b>PB HLTH 203A: Theories of Health and Social Behavior (HSB MPH)</b>	<b>Reading Response Forum Posts for Weeks 5, 7, 8:</b> Lectures and class discussion cover theories related to structural bias, social inequities and racism. Students summarize key concepts and arguments from weekly assigned readings, and provide analysis that focus on the interconnections and differences among the readings.
	<b>PB HLTH W200G: Introduction to Health and Social Behavior (online)</b>	<b>Final Exam - Questions 9, 19, 32, 38 (Short Essay #2):</b> In Week 5, students explore levels of racism in Jones (2000) Gardners Tale allegory and through other resources. Students complete an online quiz and discuss in an online forum why race matters in health, what it means for race to be a social construct and the relationship between racial/ethnic health disparities and SES health disparities. The final exam includes questions about how structural bias, social inequities and racism undermine health and requires an essay on institutionalized racism.

Competency	Course	Describe specific assessment opportunity
<b>Planning &amp; Management to Promote Health</b>		
7. Assess population needs, assets and capacities that affect communities' health	<b>PB HLTH 200L: Health and Social Behavior (residential: all except HSB MPH)</b>	<b>Paper 1:</b> Week 3 lecture, in-class discussion, and readings focus on partnered and participatory research. In Paper 1, students present a public health intervention for a public health challenge of their choice by clearly summarizing the problem by answering the questions: what is the problem, who is affected, and why does it matter? Students also assess the community needs, assets, abilities, and readiness to implement an intervention. Paper 1 is a group project; peer evaluations will need to be completed for each group member at time of submission for Paper 1.
	<b>PB HLTH 203A: Theories of Health and Social Behavior (HSB MPH)</b>	<b>Paper 1:</b> Students present a public health challenge of their choice by clearly summarizing the problem by answering the questions what is the problem, who is affected, and why does it matter? Students will draw from published reports and public health literature to answer these questions, to characterize existing interventions to assess the community needs, assets, abilities, and readiness to implement an intervention.
	<b>PB HLTH W200G: Introduction to Health and Social Behavior (online)</b>	<b>Community Workbook - Week 10 Community Asset Mapping Assignment:</b> In Week 10, students review Kansas University Community Toolbox Chapter 3, Section 8. The Community Asset Mapping Assignment assesses student ability to identify assets and stressors that exist in their chosen community to be incorporated into developing a multi-level intervention design. Students will conduct research and draw from published reports, community organization publications, and public health literature to complete a chart that lists community factors (e.g., food access and availability, educational opportunities, transportation, affordable housing) and assess the extent to which it is a resource or stressor in the community. Students then complete a series of questions to synthesize the findings in their chart. Each group member will fill out a survey that assesses the participation and level of effort of themselves and each of the other members in collaborative work on the Final Community Project as well as the Community Assignments.

Competency	Course	Describe specific assessment opportunity
8. Apply awareness of cultural values and practices to the design, implementation or critique of public health policies or programs	<b>PB HLTH 200L: Health and Social Behavior</b> (residential: all except HSB MPH)	<b>Paper 2:</b> Week 2 lecture and in-class discussion cover how structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community, and societal levels. Week 4 lecture and in-class discussion cover social and economic determinants of health, health disparities, cultural competency, and cultural humility. Students will be assessed in Paper 2 on how their intervention of choice demonstrates clear application of each theoretical perspective, specifically discussing how the intervention applies the theory to address the problem, including considerations of its cultural and contextual fit for the community as described in the problem statement. Paper 2 is a group project; peer evaluations will need to be completed for each group member at time of submission for Paper 2.
	<b>PB HLTH 203A: Theories of Health and Social Behavior (HSB MPH)</b>	<b>Reading Response Forum Posts for Week 13:</b> Lecture and class discussions cover how to apply awareness of cultural values and practices to the design or implementation of public health policies or programs. Students summarize key concepts and arguments from weekly assigned readings, and provide analysis that focus on the interconnections and differences among the readings.
	<b>PB HLTH W200G: Introduction to Health and Social Behavior (online)</b>	<b>Class Discussion Forum Posts for Week 11:</b> Week 11 lecture and readings cover Community-Based Participatory Research (CBPR). Students discuss the difference between cultural humility and cultural competence and explore how practicing cultural humility contributes to community partner engagement.
9. Design a population-based policy, program, project or intervention	<b>PB HLTH 200L: Health and Social Behavior</b> (residential: all except HSB MPH)	<b>Paper 2:</b> Week 12 explores how theory is used to guide design and evaluation of population-based policies, programs, and interventions. In Paper 2, students will consider the same public health problem they considered in Paper 1 and analyze how they would extend their analysis and approach to design an intervention. The paper should start with a brief description of the public health problem and then what the field knows about the range of factors that influence the problem. Paper 2 should also include an assessment of the community needs, assets, abilities and readiness to implement the intervention. Paper 2 is a group project; peer evaluations will need to be completed for each group member at time of submission for Paper 2.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 203A: Theories of Health and Social Behavior (HSB MPH)</b>	<b>Reading Response Forum Posts for Week 6:</b> Lecture and class discussions for Week 6: Moving Beyond the Individual I: structural violence, ecosocial theory, fundamental cause theory focus on how to apply theoretical perspectives on structure and inequality to the design of population-based policies and interventions. Students summarize key concepts and arguments from weekly assigned readings, and provide analysis that focus on the interconnections and differences among the readings.
	<b>PB HLTH W200G: Introduction to Health and Social Behavior (online)</b>	<b>Final Community Project Conceptual Model and Narrative:</b> Student groups develop a social ecological model and in a five-to seven-page narrative students introduce a community, identify a public health outcome/issue affecting their community, identify community stakeholders they would partner with to design possible interventions that would target factors or exposures at the three (or more) different levels as depicted in their model (e.g., policy-level intervention). Theories introduced during Weeks nine and 10 of the course are also applied to multi-level intervention design for a community/population-level health interventions at the inner levels of the ecological model. Peer evaluations (5% of the course grade) will need to be completed by each group member following the submission of the final project.
10. Explain basic principles and tools of budget and resource management	<b>PB HLTH 200J: Health Policy and Management Breadth (residential: all except 4+1, 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Week 10 Quiz:</b> Week 10 lecture and readings cover Healthcare Management: Governance, Budget & Finance, Human Resources. Quiz questions test understanding of basic principles of finance, budget and resource management.
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Quiz - Budget and Resource Management:</b> Week 4 lecture covers health care finance and budgeting. The quiz tests student understanding of basic principles and tools of finance, budget, and resource management for health care organizations.
	<b>PB HLTH W200E: Introduction to Health Policy and Management (online)</b>	<b>Week 2 Knowledge Check:</b> Week 2 lectures, readings, and videos cover fiscal stewardship, budgeting and resource management in public and private healthcare settings. The Week 2 Knowledge Check includes questions testing students' understanding of basic principles and tools of finance, budget, and resource management.



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 290: HPM in Public Health (MBA/MPH)</b>	<b>Quiz #2: Finance &amp; Budgeting Section:</b> Area 3 lecture and readings cover the role of finance and resource management for health care organizations. The quiz checks understanding of principles of budgeting and communicating fiscal information also key issues in forecasting and resource allocation/service line analysis.
	<b>PB HLTH 223D: Foundations of Health Policy and Management (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH)</b>	<b>Midterm Exam Question 2:</b> Midterm exam includes question testing student understanding of basic principles and tools of finance, budget, and resource management.
11. Select methods to evaluate public health programs	<b>PB HLTH 200L: Health and Social Behavior (residential: all except HSB MPH)</b>	<b>Thought Memo #3:</b> Students select and respond to one of three prompts related to theoretical principles learned in class and how the theories may be applied to the interventions identified in the prompt. Week 13 will include a video on the basis for evaluation and the selection of evaluation methods as part of the discussion of community-based participatory research in public health to look at evaluation methods from a participatory approach.
	<b>PB HLTH 203A: Theories of Health and Social Behavior (HSB MPH)</b>	<b>Reading Response Forum Posts for Week 7:</b> Lecture and class discussions for Week 7: Moving Beyond the Individual 2: Political Economy, Critical Consciousness include an online video on the basis for evaluation and the selection of evaluation methods followed by a class exercise on evaluation. Students summarize key concepts and arguments from weekly assigned readings, and provide analysis that focus on the interconnections and differences among the readings.
	<b>PB HLTH W200G: Introduction to Health and Social Behavior (online)</b>	<b>Class Discussion Forum Posts for Week 12:</b> The topic for Week 12 is Evaluation Methods for Public Health Programs: A Participatory Approach. Students review Chapter 36 from the University of Kansas Community Tool Box (Section 1: Framework for Program Evaluation, Section 5: Developing an Evaluation Plan, and Section 6: Participatory Evaluation). Students will be assessed on their ability to select methods to evaluate public health programs through their response in the online course discussion forum to the following prompt: "Consider one of the interventions you are proposing for your Community Workbook Final Project, how would you select evaluation methods using a participatory approach? In your response, consider the level(s) of impact, community partners at that level or levels, and the determinants you might want to measure when selecting evaluation methods."

Competency	Course	Describe specific assessment opportunity
<b>Policy in Public Health</b>		
12. Discuss the policy-making process, including the roles of ethics and evidence	<b>PB HLTH 200J: Health Policy and Management Breadth</b> (residential: all except 4+1, 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)	<b>Weeks 7, 8, and 9 Quizzes:</b> Module 2 covers health policy, specifically U.S. health policy in Week 6, U.S. health policy reform in Week 7, global health policy and reform in Week 8, and health policy advocacy in Week 9. Quizzes assess students' understanding of the policy-making process.  <b>Op-Ed:</b> Ethics in the policy-making process is part of the discussion with almost all of the invited speakers and stressed throughout the course, including two small group workshops with the professor that addresses the ethical dimensions of public health policy issues. Students write an op-ed to support a policy proposal, based on Bardach's eightfold policy analysis framework, which includes evidence-based policy options and criteria (ethics and impact-related) for selecting among them.
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Policy Memo:</b> Students draft a policy memo in which they assess three options for addressing a public health problem. Students will consider stakeholder/coalition engagement, the likelihood of passage, and the impact of each given option on health/racial equity. The memo will culminate in a recommendation for policy action.
	<b>PB HLTH W200E: Introduction to Health Policy and Management (online)</b>	<b>Weekly Assignment #1 and Week 1 Knowledge Check Questions 1-8:</b> Students specify and briefly apply the steps of the policymaking process, including the roles of evidence, ethics, and the extent to which the 10 Essential Public Health Services are being addressed by each policy.
	<b>PB HLTH 290: HPM in Public Health (MBA/MPH)</b>	<b>Policy Case:</b> Students complete a policy case to deepen understanding of lectures and reading on health policy setting and the important roles of ethics, equity and evidence. For this exercise, the student will consider one of two policy areas: 1) The Dilemma of Creating Equitable and Affordable Access to Novel Gene Therapy Drugs, or 2) Key Policy Considerations When Designing a Population Level Vaccine Program. In prompt 1, students will consider the need for public policy to ensure equitable access to emerging biomedical innovations around gene editing treatments and what form that policy should take (FDA regulation, CMS coverage, other federal law, corporate policies for private payers, etc). In prompt 2, students should use the current CV19 vaccine roll out as a case study and analyze the response at the global, federal and (select) state levels to try and achieve the goal of substantially increasing population immunity globally with a lens of health equity. Both prompts have students evaluate the policy making process.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 223D: Foundations of Health Policy and Management</b> (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH)	<p><b>Policy Memo 1:</b> Students select a policy intervention related to U.S. domestic health policy and write a memo analyzing the potential impacts of the policy on different stakeholders based on evidence, and offering recommendations for how to intervene in the policy-making process to advance or slow the potential policy as appropriate.</p> <p><b>Policy Problem-Solving Assignment - Policy Memo 2:</b> For the policy problem solving assignment series, students begin by working in a group to describe a problem facing the U.S. healthcare system, along with a desired policy objective that would help address the problem, and three-five evaluative criteria to assess how well a policy alternative would address the objective. Then, individually, each student completes an individual policy memo in which they research one potential policy alternative that would address the objective previously identified with their group, use evidence to describe how their chosen policy alternative would perform on each evaluative criterion, and discuss ethical implications such as which people or populations would be most or least impacted by their policy alternative or other tradeoffs.</p>
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	<b>PB HLTH 200K: Environmental Health Sciences Breadth</b> (residential: all except 4+1, EHS MPH, GHE MPH)	<p><b>Policy/Technical Brief:</b> Week 7 lecture and readings cover Science Communication. Learning objectives for Week 7 include describing ways public health can play a role in policymaking and litigation, describing various approaches of communicating EH science and research in a meaningful way, identifying ways to amplify neglected voices in environmental health, and learning methods to be a more effective communicator of science. Students will be required to research an environmental or occupational health (EOH) topic of their choice and develop a policy/technical brief aimed at changing knowledge, attitudes or practices related to the topic of their choice. The brief will be a four- to six-page policy or technical brief on any issue relevant to occupational or environmental health. The brief should consider a topic relevant to occupational or environmental health, review the problem and its importance as well as consider any research gaps in the area. For this assignment, the student will be expected to: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes and/or practices related to a specific topic in EOH; 3) consider current and potential policies at multiple levels. Identification of the target audience is essential for addressing audience needs, establishing credibility, and building support for clear and feasible recommendations on policy steps to be taken.</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Policy Memo:</b> Students draft a policy memo in which they assess three options for addressing a public health problem. Students will consider stakeholder/coalition engagement, the likelihood of passage, and the impact of each given option on health/racial equity. The memo will culminate in a recommendation for policy action.
	<b>PB HLTH 270: Introduction to Environmental Health Sciences (EHS MPH, GHE MPH)</b>	<b>Policy/Technical Brief:</b> Students will develop a policy/technical brief aimed at influencing policy makers related to the topic of their choice. The brief will be a six- to eight-page policy or technical brief. For this assignment, students will be expected to: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes and/or practices related to a specific topic in EOH; 3) consider current and potential policies at multiple levels. Identification of the target audience is essential for addressing audience needs, establishing credibility, and building support for clear and feasible recommendations on policy steps to be taken.
	<b>PB HLTH W200F: Introduction of Environmental Health Sciences (online)</b>	<b>Assignment 4 - Case Study Policy Brief:</b> Students will develop a policy/technical brief aimed at influencing policy makers related to the topic of their choice. The brief will be a four- to six-page policy or technical brief. For this assignment, students will be expected to: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes and/or practices related to a specific topic in EOH; 3) consider current and potential policies at multiple levels. As case study assignments are a major group project, each student's contribution to the final product will factor into the student's final grade for the course. In Week 14, students will be rating the contributions of their team members. Identification of the target audience is essential for addressing audience needs, establishing credibility, and building support for clear and feasible recommendations on policy steps to be taken.

Competency	Course	Describe specific assessment opportunity
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations	<b>PB HLTH 200K: Environmental Health Sciences Breadth</b> (residential: all except 4+1, EHS MPH, GHE MPH)	<b>Editorial/Letter to Politician:</b> Week 7 lecture and readings cover Science Communication. Learning objectives for Week 7 include describing ways public health can play a role in policymaking and litigation, describing various approaches of communicating EH science and research in a meaningful way, identifying ways to amplify neglected voices in environmental health, and learning methods to be a more effective communicator of science. Students will write a brief advocacy piece (e.g. letter to the editor, letter to U.S., state, or local representative, op-ed) regarding their interests in environmental health and advocating for an environmental health policy change that would improve the health of the population most affected by their selected policy.
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Letter-to-the-Editor:</b> Students will draft and submit a letter-to-the editor in response to a recent news article. In their response students will engage with the author regarding the impact of the issue on the health status and equitable application/engagement of diverse populations.
	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b> (EHS MPH, GHE MPH)	<b>Editorial/Letter to Politician:</b> Week 9 lecture and readings cover environmental justice and the legacy of structural racism. Students will write a brief advocacy piece (e.g. letter to the editor, letter to U.S., state, or local representative, op-ed) regarding their interests in environmental health and advocating for an environmental health policy change that would improve the health of the population most affected by their selected policy.
	<b>PB HLTH W200F: Introduction of Environmental Health Sciences</b> (online)	<b>Assignment 4 - Case Study Policy Brief:</b> Students will develop a policy/technical brief aimed at influencing policy makers related to the topic of their choice. The brief will be a four- to six-page policy or technical brief. For this assignment, students will be expected to: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes and/or practices related to a specific topic in EOH; 3) consider current and potential policies at multiple levels. As case study assignments are a major group project, each student's contribution to the final product will factor into the student's final grade for the course. In Week 14, students will be rating the contributions of their team members.

Competency	Course	Describe specific assessment opportunity
15. Evaluate policies for their impact on public health and health equity	<b>PB HLTH 200J: Health Policy and Management Breadth</b> (residential: all except 4+1, 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)	<b>Midterm Exam Very Short Answer Questions 16-19:</b> Midterm exam includes questions on health policy and prompts students to analyze the policies' impact on public health and health equity.
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Policy Memo:</b> Students draft a policy memo in which they assess three options for addressing a public health problem. Students will consider stakeholder/coalition engagement, the likelihood of passage, and the impact of each given option on health/racial equity. The memo will culminate in a recommendation for policy action.
	<b>PB HLTH W200E: Introduction to Health Policy and Management (online)</b>	<b>Midterm Exam Question 11:</b> The midterm exam includes a question on procedural equity and substantive equity and what each implies about access, treatment, and health outcomes.
	<b>PB HLTH 290: HPM in Public Health (MBA/MPH)</b>	<b>Policy Case:</b> Students complete a policy case to deepen understanding of lectures and reading on health policy setting and the important roles of ethics, equity and evidence. For this exercise, the student will consider one of two policy areas: 1) The Dilemma of Creating Equitable and Affordable Access to Novel Gene Therapy Drugs, or 2) Key Policy Considerations When Designing a Population Level Vaccine Program. In prompt 1, students will consider the need for public policy to ensure equitable access to emerging biomedical innovations around gene editing treatments and what form that policy should take (FDA regulation, CMS coverage, other federal law, corporate policies for private payers, etc). In prompt 2, students should use the current CV19 vaccine roll out as a case study and analyze the response at the global, federal and (select) state levels to try and achieve the goal of substantially increasing population immunity globally with a lens of health equity.
	<b>PB HLTH 223D: Foundations of Health Policy and Management (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH)</b>	<b>Policy Memo 1:</b> Students select a policy intervention related to U.S. domestic health policy and write a memo analyzing the potential impacts of the policy on public health and health equity, and offering recommendations for how to advance or slow the potential policy as appropriate.

Competency	Course	Describe specific assessment opportunity
<b>Leadership</b>		
16. Apply leadership and/or management principles to address a relevant issue	<b>PB HLTH 291A: Public Health Practice &amp; Leadership Seminar</b> (residential selective: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)	<b>Personal Leadership Statement and Discussion Post 2:</b> Definitions of leadership, from students' professional and lived experiences and key theoretical frameworks, will be examined through course materials, in-class activities, and assignments noting observed similarities, strengths, and limitations. Students will be assessed on their application of key leadership characteristics through a personal leadership statement and discussion post on effective leadership in public health.
	<b>PB HLTH 290: Strategic Leadership</b> (residential selective available Spring 2023: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)	<b>Personal Leadership Statement and Discussion Post:</b> Definitions of leadership, from students' professional and lived experiences and key theoretical frameworks, will be examined through course materials, in-class activities, and assignments noting observed similarities, strengths, and limitations. Students will be assessed on their application of key leadership characteristics through a personal leadership statement and discussion post on leadership theories.



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 223C: Strategic Management in the Health Sector</b> <b>(2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Group Strategy Project:</b> Students will work in teams of four to six students on a live client project, tracking to a strategic deliverable that fits their organization's specific prompt. These will span different parts of the overall cycle and range from strategy development, evaluation or some aspect of implementation, monitoring and can be more qualitative or quantitative in nature. Students will: <ul style="list-style-type: none"> <li>• Engage with the client</li> <li>• Initially create both a collaborative plan &amp; project description/scope</li> <li>• Learn about the organization, the current issue/opportunity</li> <li>• Conduct a SWOT and/or PEST analysis (submit to faculty)</li> <li>• Perform other analytics as needed using qualitative and quantitative data</li> <li>• Create recommendations that reflect a guided decision-making</li> <li>• Consider the most appropriate communication strategy/framing for your recommendations</li> <li>• Identify key stakeholders/axis of influence</li> </ul> Teams will memorialize their analysis and recommendations in a PowerPoint presentation that they will present in class and take place during the last two sessions. The Final Group project includes a student self and team assessment of performance.
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care</b> <b>(2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Module 5 Case Study Analysis:</b> Organizational change management is a focus of Module 5, which includes a written analysis and live discussion of a case study on the Veterans Health Administration.



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W289: Interdisciplinary Seminar (online)</b>	<b>Influence Plan:</b> Students attend on-campus workshops during Weeks 4 and 5. During the Leadership in Public Health: Engaging Healthcare Providers in the Public Health Revolution workshop, students will complete a group exercise to motivate healthcare providers to embrace, promote and address social determinants of health for the populations they serve. Student groups will create an influence plan for healthcare providers that identifies and promotes interprofessional collaboration. Students will be assessed on their ability to apply leadership principles including how well their influence plans help the intended decision maker, overcomes resistance and roadblocks that might exist and utilizes effective communication strategies.
17. Apply negotiation and mediation skills to address organizational or community challenges	<b>PB HLTH 291A: Public Health Practice &amp; Leadership Seminar (residential selective: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Case Study - Negotiation:</b> The topic of Session 9 is negotiations. Through readings, role-play exercises, small group discussions, and peer/instructor feedback, students will identify behaviors that effective leaders practice when they negotiate. Students will apply core negotiation skills after identifying positions, interests, and objective decision-making criteria of parties involved in a case simulation involving multiple stakeholders within the same municipality, with the public health department as one essential partner. Students will also apply a source of power taxonomy (Raven & French, 1968) to the case simulation to understand the barriers/facilitators to influencing different stakeholders within and across organizations.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 290: Strategic Leadership (residential selective available Spring 2023: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Sutter-Alta Bates Exercise Reflection Paper:</b> Students will role-play one of eight interprofessional roles within either Sutter Health (MD, finance, community relations, strategy) or the community (advocate/patient, local business person, City Council, referring MD) and prepare for a negotiation meeting on Sutter Health's decision to close Alta Bates Hospital in Berkeley, CA. Students will prepare in advance, using the Health Risk Impact Assessment Report and other publicly available information on the closure. Teams should have at least one prep session to plan how they want to conduct the negotiation, understand interest-based goals, possible counters to the other side's interest-positions, what they are potentially willing to offer/settle for, etc. Afterward, each student will memorialize their outcomes and reflection on what they learned via a two- to three-page paper that includes the (a) full/partial outcome, (b) assessment of how they and their team performed, (c) how personal negotiating style factored into how they played their assigned role, (d) what it was like to have a diverse group at the table, managing across different professions and lens - how did you contribute to fostering an inclusive climate, and (e) any opportunities for improvement.
	<b>PB HLTH 223C: Strategic Management in the Health Sector (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Sutter Negotiation Exercise:</b> Students will embody one of eight interprofessional roles within either Sutter Health (MD, finance, community relations, strategy) or the community (advocate/patient, local business person, City Council, referring MD) and prepare for a negotiation meeting on Sutter Health's decision to close Alta Bates Hospital in Berkeley, CA. Students will prepare in advance, using the Health Risk Impact Assessment Report and other publicly available information on the closure. Teams should have at least one prep session to plan how they want to conduct the negotiation, understand interest-based goals, possible counters to the other side's interest-positions, what potentially they are willing to offer/settle for, etc. Afterward, each student will memorialize their outcomes and reflection on what they learned via a two- to three-page paper that includes the (a) full/partial outcome, (b) assessment of how they and their team performed, (c) how personal negotiating style factored into how they played their assigned role, (d) what it was like to have a diverse group at the table, managing across different professions and lens - how did you contribute to fostering an inclusive climate, and (e) any opportunities for improvement.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Module 2 Case Study Analysis:</b> Module 2 includes In-class discussion of handling problem employees (staff and physicians) and the role of human resources management and labor unions in communicating with challenging employees as well as developing and implementing employee remediation plans. The session also covers interest-based problem solving as a method for collaborative decision-making with represented employees. Module 2 Case Study is focused on managing interpersonal challenges in the workplace, specifically, a top performing and reputable physician with problem interactions with staff.
	<b>PB HLTH W289: Interdisciplinary Seminar (online)</b>	<b>Negotiations Final Assignment:</b> In Negotiation Module Sessions 1-3, students develop negotiation skills through role-playing exercises, discussions, and peer and instructor feedback. The Negotiations Module Final Assignment assesses the student's response to three prompts about negotiation and their negotiation skills.
<b>Communication</b>		
18. Select communication strategies for different audiences and sectors	<b>PB HLTH 291A: Public Health Practice &amp; Leadership Seminar (residential selective: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Public Story Presentation:</b> Students create a public story using Marshall Ganz's narrative framework based on one of the following prompts: 1) an experience that influences how the student lead from where they are, or 2) a time when the student was deeply moved by a public health issue that they wanted to change or improve. Students will present their stories in a small group. Following the presentation, peers will provide feedback about presentation and delivery. Assessment criteria for the public story include: logical and clear structure of speech, delivery, authenticity & creativity, and thoroughness & quality of the preparation work where applicable.
	<b>PB HLTH 290: Strategic Leadership (residential selective available Spring 2023: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Public Story Presentation:</b> Students create a public story using Marshall Ganz's narrative framework based on one of the following prompts: 1) an experience that influences how the student lead from where they are, or 2) a time when the student was deeply moved by a public health issue that they wanted to change or improve. Students will present their stories within a small group. Following the presentation, peers will provide feedback about presentation and delivery. Assessment criteria for the public story include: logical and clear structure of speech, delivery, authenticity & creativity, and thoroughness & quality of the preparation work where applicable.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 223C: Strategic Management in the Health Sector (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<p><b>Group Strategy Project:</b> In the strategy project, students are asked to identify and describe how they would communicate SWOT and strategies to stakeholders. Students will work in teams of four to six students on a live client project, tracking to a strategic deliverable that fits their organization's specific prompt. These will span different parts of the overall cycle and range from strategy development, evaluation or some aspect of implementation, monitoring and can be more qualitative or quantitative in nature. Students will:</p> <ul style="list-style-type: none"> <li>• Engage with the client</li> <li>• Initially create both a collaborative plan &amp; project description/scope</li> <li>• Learn about the organization, the current issue/opportunity</li> <li>• Conduct a SWOT and/or PEST analysis (submit to faculty)</li> <li>• Perform other analytics as needed using qualitative and quantitative data</li> <li>• Create recommendations that reflect a guided decision-making</li> <li>• Consider the most appropriate communication strategy/framing for your recommendations</li> <li>• Identify key stakeholders/axis of influence</li> </ul> <p>Teams will memorialize their analysis and recommendations in a PowerPoint presentation that they will present in class and take place during the last two sessions. The Final Group project includes a student self and team assessment of performance.</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care</b> (2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)	<b>Team Video Project Workbook - Weeks 5, 6, 7:</b> The course requires students to select and use appropriate communication strategies for a range of key stakeholders impacted by organizational change. The Team Video Project involves the development of a project charter for an performance improvement project, which is a communication tool to communicate complex organizational changes to executive and frontline stakeholders. The charter details organizational sponsorship, performance targets, an implementation plan (including strategies for communication of the change to different stakeholders) and timeline, a family of measures (process, outcome, and balancing measures). The performance improvement module (Module 6) introduces students to tools that assess stakeholder needs, business requirements to meet needs, and communication approaches to aid with implementing changes. Students work in teams to integrate at least one communication tool into their final team presentation. Examples include change impact assessment, stakeholder assessment, sustainability plan, and an explicit communication plan that requires students to segment key audiences and delineates key messages, communication vehicles, deliverers of communication, and timelines.
	<b>PB HLTH W200F: Introduction of Environmental Health Sciences</b> (online)	<b>Assignment 4 - Case Study Policy Brief:</b> Students will develop a policy/technical brief aimed at influencing policy makers related to the topic of their choice. The brief will be a four- to six-page policy or technical brief. For this assignment, students will be expected to: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes and/or practices related to a specific topic in EOH; 3) consider current and potential policies at multiple levels. As case study assignments are a major group project, each student's contribution to the final product will factor into the student's final grade for the course. In Week 14, students will be rating the contributions of their team members.

Competency	Course	Describe specific assessment opportunity
19. Communicate audience-appropriate (i.e., non-academic, non-peer audience) public health content, both in writing and through oral presentation	<b>PB HLTH 200K: Environmental Health Sciences Breadth</b> <b>(residential: all except 4+1, EHS MPH, GHE MPH)</b>	<p><b>Editorial/Letter to Politician:</b> Week 7 lecture and readings cover Science Communication. Learning objectives for Week 7 include describing ways public health can play a role in policymaking and litigation, describing various approaches of communicating EH science and research in a meaningful way, identifying ways to amplify neglected voices in environmental health, and learning methods to be a more effective communicator of science. Students write a brief advocacy piece (e.g. letter to the editor, letter to U.S., state, or local representative, op-ed) regarding their interests in environmental health and advocating for an environmental health policy change that would improve the health of the population most affected by their selected policy.</p> <p><b>Presentation:</b> Students prepare a 12-minute presentation to a target audience of their choice on an environmental or occupational health topic related to a class theme. The goal of the presentation should be to identify a problem that needs implementation of a solution or a policy and present it in an audience-appropriate manner.</p>
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<p><b>Letter-to-the-Editor:</b> Students will draft and submit a letter-to-the editor in response to a recent news article. In their response students will engage with the author regarding the impact of the issue on the health status and equitable application/engagement of diverse populations.</p>
	<b>PB HLTH 270: Introduction to Environmental Health Sciences (EHS MPH, GHE MPH)</b>	<p><b>Editorial/Letter to Politician:</b> Week 9 lecture and readings cover environmental justice and the legacy of structural racism. Students will write a brief advocacy piece (e.g. letter to the editor, letter to U.S., state, or local representative, op-ed) regarding their interests in environmental health and advocating for an environmental health policy change that would improve the health of the population most affected by their selected policy.</p> <p><b>Presentation:</b> Students prepare a 15-minute presentation to a target audience of their choice on an environmental or occupational health topic related to a class theme. The goal of the presentation should be to identify a problem and advocate for a solution or a policy that should be implemented and contextualize the topic within the larger set of sources and health effects of major environmental and occupational hazards in an audience-appropriate manner. Students should also identify key stakeholders and propose strategies to engage community partnerships.</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W200F: Introduction of Environmental Health Sciences (online)</b>	<b>Assignment 4 - Case Study Policy Brief:</b> Lecture and readings for Week 13 cover Communicating Environmental Health Science. In groups, students develop a policy/technical brief on a topic of their choice aimed at influencing an audience of policy makers. Students will: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes and/or practices related to your group's specific topic in environmental or occupational health problem; 3) consider current and potential policies at multiple levels. Each student's contribution to the final product will factor into their final grade for the course. In Week 14, students will be rating the contributions of their team members.
20. Describe the importance of cultural competence in communicating public health content	<b>PB HLTH 200L: Health and Social Behavior (residential: all except HSB MPH)</b>	<b>Paper 1:</b> The topic of Week 3 is Social and economic determinants of health, health disparities, cultural competency and cultural humility. Lectures and readings present the importance of cultural competency and cultural humility in communicating public health. In Paper 1, students propose for a public health problem of their choosing how their intervention will acknowledge and consider the importance of cultural competence, cultural humility, and structural competence in their community of focus. Paper 1 is a group project; peer evaluations will need to be completed for each group member at time of submission for Paper 1.
	<b>PB HLTH 203A: Theories of Health and Social Behavior (HSB MPH)</b>	<b>Paper 1:</b> The topic of Week 11 is Community and Situated Knowledge. The lecture and class discussion will consider how "community" is conceptualized in public health and review approaches to assessing community need and working with diverse communities to conduct public health research where students identify ways that clinicians and public health professionals can approach cultural and structural competency for specific cases. In Paper 1, students identify a health problem or intervention that they critically explore through different theories from the class, including what implications each theory has for public health practice related to the problem considering relevant cultural and contextual factors in their intervention design.



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W200G: Introduction to Health and Social Behavior (online)</b>	<b>Final Exam Question 40 (Long Essay):</b> The topic of Week 11 is Community-Based Participatory Research. From the lecture and readings, students learn differences between cultural humility and cultural competence, and discuss the importance of practicing cultural humility for community partner engagement. The Final Exam includes an essay prompting students to imagine they are going to use a CBPR approach in the community chosen for their Final Community Project, and describe the importance of cultural humility in working with community stakeholders in one of their proposed interventions.
<b>Interprofessional Practice</b>		
21. Integrate perspectives from other sectors and/or professions to promote and advance population health	<b>PB HLTH 291A: Public Health Practice &amp; Leadership Seminar (residential selective: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Leader Spotlight:</b> Based on their professional backgrounds and public health-related interests, students are assigned to small groups that reflect diverse work experiences and multiple levels of impact (e.g., based on sector, community). Students from the Joint Medical Program, Interdisciplinary Program, and/or alumni will be invited to participate where additional specific professions are needed. Case studies will apply best practices for interprofessional collaboration and group discussions will identify benefits and challenges of coordination, collaboration, and communication within an interprofessional team. Guest speakers, representing different professional backgrounds, will share reflections about change efforts that they have led and/or observed within different systems/organizations. Students will complete a Leader Spotlight paper that assesses leadership approaches that have been employed within an interdisciplinary team context and applies skills that are essential to participatory decision-making. Option A entails an interview with a leader and Option B is an analysis of a leader (no direct interaction).
	<b>PB HLTH 290: Strategic Leadership (residential selective available Spring 2023: all except 2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH)</b>	<b>Sutter-Alta Bates Exercise Reflection Paper:</b> Students participate in a negotiation exercise and role-play with a range of professional identities. Students will write a reflection on their individual experience of the negotiation that will include: 1) The outcome, 2) Assessment of how they and their team performed in terms of how aligned to best practices for interest-based negotiating, inclusiveness and stakeholder empathy. Did you other others fall into a more positional stance during the negotiation - if so what happened? 3) How their personal negotiating style factored into how they played their assigned role, 4) What was it like to have a diverse group at the table with different goals (on your team and also the opposing side)? How did they manage across the different professional lenses? 5) Any opportunities for improvement.



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 223C: Strategic Management in the Health Sector</b> <b>(2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Sutter-Alta Bates Exercise Reflection Paper:</b> Students participate in a negotiation exercise and role-play with a range of professional identities. Students will write a reflection on their individual experience of the negotiation that will include: 1) The outcome, 2) Assessment of how they and their team performed in terms of how aligned to best practices for interest-based negotiating, inclusiveness and stakeholder empathy. Did you other others fall into a more positional stance during the negotiation - if so what happened? 3) How their personal negotiating style factored into how they played their assigned role, 4) What was it like to have a diverse group at the table with different goals (on your team and also the opposing side)? How did they manage across the different professional lenses? 5) Any opportunities for improvement.
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care</b> <b>(2-Year HPM MPH, 11-Month HPM MPH, MPP/MPH, MBA/MPH selective)</b>	<b>Team Video Project Workbook:</b> The course introduces students to using business and management methods to improve population health. Core to imparting these business/management competencies is a team assignment threaded throughout the course with a final 15 minute team presentation to a health care system's "board of directors" about improving organizational performance. The course includes team project milestones due in each of 7 modules, which require integration of business and management concepts to improve organizational performance and health outcomes. Module 1 includes an in-class team exercise focused on establishing "norms of conduct" for the course project team. In Module 2, students respond to a survey and collectively analyze organizational learning, including psychological safety, openness to new ideas, and experimentation in their own professional work units. Module 3 is fully devoted to examining the facilitators of team effectiveness in health care, which include in class discussion of team structures and communication strategies, and written responses and live discussions of case studies focused on conflict management and implementing team approaches in health care delivery organizations. In Module 4, the course has a midterm case study focused on using team science principles to successfully implement a team-based approach to complex care management in an under-resourced setting. In Module 5, project teams collectively establish SMART goals and performance improvement targets to effectively communicate these priorities within their case's health care system. In Module 6, teams work collectively to analyze health system performance and operational data (quantitative and qualitative data) to plan for the testing and dissemination of performance improvement strategies throughout a complex health system.

Competency	Course	Describe specific assessment opportunity
		In Module 7, students work in teams to develop a sustainability plan for their project and present their plan to the class (who role-play as members of the board).
	<b>PB HLTH W289: Interdisciplinary Seminar (online)</b>	<b>Influence Plan.</b> Students attend on-campus workshops during Weeks 4 and 5. Students complete the Kolb Learning Style Inventory - Version 3.1, Technical Specifications. HayGroup, 2005. During a three-hour Working in Interprofessional Teams workshop, students are assigned to teams based on their Learning Style results for a rapid design thinking challenge. Students explore how learning styles are influenced by personality type, educational specialization, career choice, and current job role and tasks, but are not fixed traits. Workshop teams are assigned to create interprofessional teams. All student backgrounds are available at the start of the semester and program alumni will participate in workshop teams where additional specific professions need representation. During the Leadership in Public Health: Engaging Healthcare Providers in the Public Health Revolution workshop, students will complete a group exercise to motivate healthcare providers to embrace, promote and address social determinants of health for the populations they serve. Student groups will create an influence plan for healthcare providers that identifies and promotes interprofessional collaboration.
<b>Systems Thinking</b>		
22. Apply systems thinking tools to a public health issue to visually represent a public health issue in a format other than standard narrative	<b>PB HLTH 200K: Environmental Health Sciences Breadth (residential: all except 4+1, EHS MPH, GHE MPH)</b>	<b>Causal Loop Diagram Exercise:</b> Students will be introduced to concepts of systems thinking and its application to public health in Week 2 lecture materials and readings. Students will build a causal loop diagram in the exercise: <i>Systems Thinking in Public Health: Building a Causal Loop Diagram to Address Human Food Security</i> , and explain any interesting considerations when structuring their map and deciding the flow of their diagram.
	<b>PB HLTH 278: 4+1 Seminar (4+1)</b>	<b>Individual Response to Group Causal Loop Diagram Exercise:</b> Students will be introduced to concepts of systems thinking and its application to public health in Week 3 lecture materials and readings. In groups of three to five, students will build a causal loop diagram to address human food insecurity in the exercise: <i>Systems Thinking in Public Health: Building a Causal Loop Diagram to Address Current Impasses in Health Disparities Research</i> . Students will begin by reviewing the article "Complex Systems Thinking and Current Impasses in Health Disparities Research" with a focus on the causal loop diagrams presented in the article. Students will then be given a list of inputs to use to create a causal loop diagram. Students

Competency	Course	Describe specific assessment opportunity
		will submit their causal loop diagram with a one-page individual response to the exercise focused on their processes and explaining the considerations they discussed in the structuring of and flow of their diagram.
	<b>PB HLTH 270: Introduction to Environmental Health Sciences (EHS MPH, GHE MPH)</b>	<b>Systems Thinking Exercise:</b> Students will be introduced to concepts of systems thinking and its application to public health in Week 2 lecture materials and readings. Students will build a causal loop diagram in the exercise: <i>Systems Thinking in Public Health: Building a Causal Loop Diagram to Address Human Food Security</i> , as well as write a one-page review of the exercise focused on their processes and explaining the considerations they discussed in the structuring of and flow of their diagram.
	<b>PB HLTH W200F: Introduction of Environmental Health Sciences (online)</b>	<b>Systems Thinking Assignment:</b> Students will be introduced to concepts of systems thinking and its application to public health in Week 1 lecture materials and readings. Students will build a causal loop diagram in the exercise: <i>Systems Thinking in Public Health: Building a Causal Loop Diagram to Address Human Food Security</i> , and explain any interesting considerations when structuring their map and deciding the flow of their diagram.

- (4) Include the most recent syllabus from each course listed in Template D2-1, or written guidelines, such as a handbook, for any required elements listed in Template D2-1 that do not have a syllabus. If the syllabus does not contain a specific, detailed set of instructions for the assessment activity listed in Template D2-2, provide additional documentation of the assessment, e.g., sample quiz question, full instructions for project, prompt for written discussion post, etc.**

Syllabi and other documentation are available in ERF D2.4.

- (5) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Courses meeting foundational MPH competencies, including our leadership courses, are designed to serve students at different levels of professional experience across our MPH concentrations and program formats (4+1, 2 year, 11-month, and online).

Plans for Improvement:

We are working to ensure universal learning and assessment of foundational competencies across the different professional levels through curricular design of required courses particularly our leadership courses. We are leveraging pedagogical approaches effectively used in the online program for hybrid learning to ensure all foundational competencies are consistently and sustainably assessed for all MPH students. Teaching Town Halls for faculty on the topics of best practices for consistent and equitable assessments (March 2023) and assessing individual students in group/team projects (April 2023) will disseminate and reinforce best practices for assessing group work.

### D3. DrPH Foundational Competencies

The school documents at least one specific, required assessment activity (e.g., component of existing course, paper, presentation, test) for each competency, during which faculty or other qualified individuals validate the student's ability to perform the competency.

Assessment opportunities may occur in foundational courses that are common to all students, in courses that are required for a concentration or in other educational requirements outside of designated coursework, but the school must assess *all* DrPH students, at least once, on each competency. Assessment may occur in simulations, group projects, presentations, written products, etc.

- (1) List the coursework and other learning experiences required for the school or program's DrPH degrees. Information may be provided in the format of Template D3-1 or in hyperlinks to student handbooks or webpages, but the documentation must present a clear depiction of the requirements for each DrPH degree.

**Table D3.1.1 Requirements for DrPH**

Course number	Course name	Credits
<b>Required courses</b>		
PB HLTH 205	Program Planning and Needs Assessment	3
PB HLTH 290	Foundations of Public Health Leadership and Practice	3
PB HLTH 375	School of Public Health School-wide Pedagogy Course	2
PB HLTH 293A	DrPH Seminar	3
PB HLTH 293B	DrPH Seminar	3
PB HLTH 293C	DrPH Seminar	3
PB HLTH 293D	DrPH Seminar	3
PB HLTH 293E	DrPH Seminar	3
PB HLTH 293F	DrPH Seminar	3
	1 course in Public Health Ethics	3
	2 courses in Research Design and Methods	6
The minimum requirements for admission into the DrPH Program normally include an MPH or Master's degree from an accredited school of public health, or equivalent, and two years or more of professional experience in public health (post-master's degree) that demonstrate progressive responsibility and evidence of leadership potential. Some exceptions to the two year post-master's work requirement may be made under special circumstances. Students with a master's or a higher degree outside the field of public health who have not taken the following required courses or equivalent during their MPH (or other relevant graduate program) will be required to take them during the DrPH program, in addition to the minimum 48 units required for the DrPH.		

Course number	Course name	Credits
PB HLTH 290 and all DrPH Seminars (PB HLTH 293A, 293B, 293C, 293D, 293E, 293F) are post-masters coursework. If a student has already completed PB HLTH 205 or an equivalent program planning course before entering the DrPH program, they would be expected to work with their faculty advisor to identify an appropriate upper division course in lieu of PB HLTH 205.		
For students who do not have an MPH degree, the following courses are required; completion of equivalent online courses will be accepted		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 200K	Introduction to Environment Health Sciences	2
PB HLTH 200L	Introduction to Health & Social Behavior	2
PB HLTH 200J	Introduction to Health Policy & Management	2
PB HLTH 250A	Epidemiologic Methods I	3
<b>APE &amp; ILE courses</b>		
PB HLTH 297	Field Study in Public Health	320 hours; equivalent to eight weeks at 40 hours per week
<b>Electives</b>		
Electives		12
<b>Requirements for degree completion not associated with a course</b>		
	Qualifying Examination	

- (2) Provide a matrix, in the format of Template D3-2, that indicates the assessment activity for each of the foundational competencies listed above (1-20). If the school or program addresses all of the listed foundational competencies in a single, common core curriculum, the school or program need only present a single matrix. If the school or program relies on concentration-specific courses to assess some of the foundational competencies listed above, the school or program must present a separate matrix for each concentration.

Table D3.2.1 Assessment of Competencies for DrPH

Competency	Course	Describe specific assessment opportunity
Data & Analysis		
1. Explain qualitative, quantitative, mixed methods and policy analysis research and evaluation methods to address health issues at multiple (individual, group, organization, community and population) levels	<b>PB HLTH 293B: DrPH Seminar</b>	<b>Voices of Flint Case Study:</b> Students watch From Flint: Voices of a Poisoned City during Week 5. This week students also begin a series of sessions on methods. Using the social ecological model from Week 3, students will work in pairs/small groups to explain how they would use different methods (qualitative, quantitative, mixed methods and policy analysis research and evaluation methods) at each level of the model to gather information and data to understand the social determinants at each level and ultimately address the lead poisoning of community members in Flint, Michigan. Weeks 5-7 cover each of the methods. In Week 8, each pair/group presents and explains their process of method selection at multiple levels. Individual students are responsible for different components (presenting on the different levels and methods) of the project.
	<b>PB HLTH 293C: DrPH Seminar</b>	<b>Discussion 9 and 10:</b> Session 9 covers innovative and mixed methods and Session 11 covers design of qualitative, quantitative, or mixed methods projects. In discussion assignments 9 and 10, students identify and explain the different methods that can be used to address the questions in their prospectus.
2. Design a qualitative, quantitative, mixed methods, policy analysis or evaluation project to address a public health issue	<b>PB HLTH 293C: DrPH Seminar</b>	<b>Draft two-pager with methods section:</b> Session 9 covers innovative and mixed methods and Session 11 covers design of qualitative, quantitative, or mixed methods projects. Students prepare and present their draft prospectus outline that includes a methods section, followed by group discussion and feedback.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 293D: DrPH Seminar</b>	<b>Research Summary:</b> Students will prepare a presentation of how they have designed a qualitative, quantitative, mixed methods, policy analysis or evaluation project to address the public health issue in their dissertation.
3. Explain the use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs and to address a population's health	<b>PB HLTH 293C: DrPH Seminar</b>	<b>Discussion 11:</b> Session 12 covers surveillance systems and national surveys to explain the limitations of examples (such as BRFSS, NHANES, NHIS, etc). In discussion assignment 11, students consider the use and limitations of surveillance systems and national surveys in assessing, monitoring and evaluating policies and programs and to address a population's health.
<b>Leadership, Management &amp; Governance</b>		
4. Propose strategies for health improvement and elimination of health inequities by organizing stakeholders, including researchers, practitioners, community leaders and other partners	<b>PB HLTH 293B: DrPH Seminar</b>	<p><b>Reflection Questions - Parts 1-2:</b> Weeks 9, 11, 12, and 13 cover inclusive public health practice, including principles of CBPR and cultural humility. Students discuss two case studies, including one adapted from Heitman &amp; McKieran (2003), as a group to practice using these concepts with respect to address health inequities. In Week 12, students apply concepts from readings and lectures to Case Study 1: Providing Culturally Appropriate Services in a Changing Community (updated) and Case Study 2: Unlearning and Power Asymmetry in Global Health Partnerships. During Week 13, students individually complete Reflection Questions: Strategies for Partnering with Stakeholders and Inclusive Public Health Practice that involves three parts, with Parts 1 and 2 applicable to Competency 4:</p> <ol style="list-style-type: none"> <li>(1) Briefly describe a work or research experience that you have been a part of and that involved stakeholder engagement and partnership building efforts. This can include a community/research team partnership, cross-sector engagement (e.g., between organizations), or a work/research team or collaboration. What was your primary goal?</li> <li>(2) Drawing from the Weeks 9 and 11 discussions and using your experience described above, what elements of organizing and engaging different</li> </ol>



Competency	Course	Describe specific assessment opportunity
		stakeholders did you think were successful? Why? What steps, if any, do you think could have been taken to better facilitate and improve the partnership to reach your primary goal?
5. Communicate public health science to diverse stakeholders, including individuals at all levels of health literacy, for purposes of influencing behavior and policies	<b>PB HLTH 293E: DrPH Seminar</b>  <b>PB HLTH 293F: DrPH Seminar</b>	<b>Presentations:</b> Students will be assigned one of various audiences to whom they might present their dissertation research focus. A series of mini-didactic lectures will be given for how to present to multiple audiences (one mini-lecture per audience). After each lecture, the students assigned to that audience will apply the learning to present their dissertation research progress and findings adapted to the highlighted audience. To show their understanding of the concepts, students will deliver their targeted presentation in class and receive feedback. Sample audiences include: senior stakeholders, lay audience, longer academic presentations (e.g., job talk or mock QE), shorter academic presentations (e.g., conference presentation), and elevator pitches to diverse audiences.
6. Integrate knowledge, approaches, methods, values and potential contributions from multiple professions and systems in addressing public health problems	<b>PB HLTH 205: Program Planning and Needs Assessment</b>	<b>Final Presentation:</b> Students work in groups to create a program plan for an organization. As part of the process, students do a resource mapping exercise that includes identification of the multiple professions and systems necessary to address complex multidisciplinary problems. They will be assessed on their ability to integrate knowledge, methods and approaches including contributions from multiple professions presented in the statement of purpose of their program plan. The final presentation is intended to be an engaging presentation of the key points from the final client-ready plan. The grading rubric includes assessment on a scale of 0-10 that all members of the group play a meaningful part in the final presentation.

Competency	Course	Describe specific assessment opportunity
7. Create a strategic plan	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Strategic Plan:</b> Working in groups, students will create a three- to five-page strategic plan for one organization of their choice. The plan must include the following elements: mission statement, values, strategic objectives, short term goals, priorities, initiatives, and action items and execution. Each group will present an executive summary to the class. The plan must also include a description of the changes the organization needs to make and how they will accomplish these changes in service of the overall strategy. Readings on strategic planning and change management from Sessions 4, 8, and 11 will be used as background material. Individual contributions to the group project will be assessed through confidential peer- and self-evaluations of the group process. Students share the contributions they made to the project through these forms.
8. Facilitate shared decision making through negotiation and consensus-building methods	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Facilitation Plan and Reflection:</b> Through the Session 9 lecture <i>Facilitation Skills 201: Negotiation and Conflict Resolution to Build Consensus for Shared Decision-making</i> and practice in class, students will learn strategies for negotiation and conflict resolution to build consensus for shared decision-making, including understanding various forms of consensus and strategies to achieve those different forms. Students will serve as a facilitator for a meeting outside of class and use this experience to then create a facilitation plan for a meeting of diverse stakeholders that includes decision-making. This plan will include: the purpose, outcomes, and process for the meeting; what decisions will need to be made; what viewpoints will need to be negotiated; the decision-making process; and, which strategies will be utilized around negotiation and consensus-building.

Competency	Course	Describe specific assessment opportunity
9. Create organizational change strategies	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<p><b>Strategic Plan:</b> Working in groups, students will create a three- to five-page strategic plan for one organization of their choice. The plan must include the following elements: mission statement, values, strategic objectives, short term goals, priorities, initiatives, and action items and execution. Each group will present an executive summary to the class. The plan must also include a description of the changes the organization needs to make and how they will accomplish these changes in service of the overall strategy. Readings on strategic planning and change management from Sessions 4, 8, and 11 will be used as background material. Individual contributions to the group project will be assessed through confidential peer- and self-evaluations of the group process. Students share the contributions they made to the project through these forms.</p> <p>Students will revisit their strategic plan from Session 10 and identify the changes in their organization needs to make and how they will accomplish these changes in service of the overall strategy.</p>
10. Propose strategies to promote inclusion and equity within public health programs, policies and systems	<b>PB HLTH 293B: DrPH Seminar</b>	<p><b>Reflection Questions - Part 3:</b> Weeks 9, 11, 12, and 13 cover inclusive public health practice, including principles of CBPR and cultural humility. Students discuss two case studies, including one adapted from Heitman &amp; McKieran (2003), as a group to practice using these concepts with respect to address health inequities. In Week 12, students apply concepts from readings and lectures to Case Study 1: Providing Culturally Appropriate Services in a Changing Community (updated) and Case Study 2: Unlearning and Power Asymmetry in Global Health Partnerships. During Week 13, students individually complete Reflection Questions: Strategies for Partnering with Stakeholders and Inclusive Public Health Practice that involves three parts, with Part 3 applicable to Competency #10: Select two strategies for inclusive public health practice (Week 9) and how they could be implemented in the public health program you describe above.</p>

Competency	Course	Describe specific assessment opportunity
11. Assess one's own strengths and weaknesses in leadership capacities, including cultural proficiency	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Individual Development Plan:</b> Session 4 covers self-assessing leadership skills. Students will complete the Individual Timeline (work plan) and receive detailed feedback on plan. Students complete an individual development plan, including utilizing the Immunity to Change framework to identify and make progress toward one of your goals for your professional growth. Sections of the individual development plan workbook include examining values, assessing leadership competencies, developing a mission statement, creating a networking plan, and identifying concrete development goals and an action plan to achieve those goals.
12. Propose human, fiscal and other resources to achieve a strategic goal	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Strategic Plan, Part 4 - Details for One Strategic Objective:</b> Session 10 introduces the components of effective strategic plans including resources for achieving a strategic goal followed by Session 11 which introduces the components of systems-level change with respect to organizational change management and strategies. Using one of the strategic goals developed in the strategic plan for Competency 7, students will develop a budget including human capacity and fiscal resources. Based on the organization's need and resources, students will assess the capacity and potential resources from stakeholders/partners involved in the plan. Individual contributions to the group project will be assessed through confidential peer- and self-evaluations of the group process. Students share the contributions they made to the project through these forms.

Competency	Course	Describe specific assessment opportunity
13. Cultivate new resources and revenue streams to achieve a strategic goal	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Strategic Plan, Part 4 - Details for One Strategic Objective:</b> Students will be introduced to the components of systems-level change with respect to organizational change management and strategies. Using one of the strategic goals developed in the strategic plan for Competency 7, students will create a performance management plan to monitor organizational progress against the strategies outlined in the strategic plan. In the performance management plan students will assess organizational resources available to implement the strategies outlined in the plan including cultivating new resources and revenue streams. Individual contributions to the group project will be assessed through confidential peer- and self-evaluations of the group process. Students share the contributions they made to the project through these forms.
Policy & Programs		
14. Design a system-level intervention to address a public health issue	<b>PB HLTH 205: Program Planning and Needs Assessment</b>	<b>Final Presentation:</b> Students work in groups to create a program plan for an organization. As part of the plan, students design a system-level intervention to address a public health issue of interest to the organization. The intervention description in the final plan must include the theory of change, specific objectives, approach, and measurement strategies. The final presentation is intended to be an engaging presentation of the key points from the final client-ready plan. The grading rubric includes assessment on a scale of 0-10 that all members of the group play a meaningful part in the final presentation.

Competency	Course	Describe specific assessment opportunity
15. Integrate knowledge of cultural values and practices in the design of public health policies and programs	<b>PB HLTH 205: Program Planning and Needs Assessment</b>	<b>Final Presentation:</b> Students work in groups to create a program plan for an organization. As part of the process, the students work collaboratively with the organization to integrate their cultural values and practices. Working on a real program for an actual agency provides an opportunity to learn how to adjust models, frameworks, and best practices to real world situations. The program plan will include a section describing the process by which they have communicated with the agency and collaborated in the integration of those values. The final presentation is intended to be an engaging presentation of the key points from the final client-ready plan. The grading rubric includes assessment on a scale of 0-10 that all members of the group play a meaningful part in the final presentation.
16. Integrate scientific information, legal and regulatory approaches, ethical frameworks and varied stakeholder interests in policy development and analysis	<b>PB HLTH 293D: DrPH Seminar</b>	<b>Session 4: Politics and Policies and Session 8</b> Students share relevant policy reviews to prepare students for in class activity. After reading an assigned case study and reading background material, including policy and ethical frameworks, the students work in groups to examine the various areas that contribute to analyzing and developing policy recommendations. As PH leaders, they must consider evidence-based scientific research and the legal and regulatory environment, to determine what is the best policy for a public health problem presented in the case study. To summarize the discussion and analysis, they write a one-page essay reflecting on their own perception of how scientific information, legal and regulatory approaches, ethical frameworks policy can be used to address PH problems and, more specifically, relate this to their own DrPH research project.
17. Propose interprofessional and/or intersectoral team approaches to improving public health	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Case Study 1 and 2:</b> The topic of Session 10 is Working in Interprofessional Teams. Two student cases will be shared related to building interprofessional teams. Students will discuss the cases and propose an interprofessional team to address the public health problem. Teams will choose four professions based on their own backgrounds and discuss their rationale for the choices and how they see each profession contributing to the approach to the solution.

Competency	Course	Describe specific assessment opportunity
<b>Education &amp; Workforce Development</b>		
18. Assess an audience's knowledge and learning needs	<b>PB HLTH 375: School of Public Health School-wide Pedagogy Course</b>	<b>Teaching Evaluation, Parts A and B:</b> In addition to reading about assessments and evaluations and how to utilize these methods to understand a group's knowledge and learning needs, students participate in the evaluation for PB HLTH 375 to understand the process as a hands-on experience. Students serve as Graduate Student Instructors or deliver a 20-30 minute teaching presentation in class on a range of topics related to teaching. Students in this course design and have their students complete a brief mid-semester evaluation to provide feedback on teaching. Students in this course write a one-page summary of their students' feedback from the evaluation; what revisions they plan; and, how they'll communicate the results to their students. The assignment is intended for students to receive input on how the course is going and identify any course corrections or areas to emphasize, and to practice executing a mid-semester evaluation, including design, administration, data reconciliation, and action steps. For students who are not currently teaching, they conduct the mid-semester or final evaluation for PB HLTH 375 as a course so they can achieve the same learning objectives.
19. Deliver training or educational experiences that promote learning in academic, organizational or community settings	<b>PB HLTH 375: School of Public Health School-wide Pedagogy Course</b>	<b>Have Your Teaching Observed:</b> Students serve as Graduate Student Instructors or deliver a 20-30 minute teaching presentation in class on a range of topics related to teaching. During Week 5, students complete observation checklists and reflection sheets. The assignment is intended for students to receive meaningful and direct feedback about their practice and to ultimately improve student learning outcomes by improving instructional skills.

Competency	Course	Describe specific assessment opportunity
20. Use best practice modalities in pedagogical practices	<b>PB HLTH 375: School of Public Health School-wide Pedagogy Course</b>	<b>Teaching Observation:</b> Students choose one of the following two options: 1) Observe another Graduate Student Instructor (GSI) from PB HLTH 375 or 2) Observe a faculty member who has won the Distinguished Teaching Award or another faculty member known for teaching excellence. After observation, students complete the Classroom Observation Checklist and reflection sheet. The assignment is intended for students to learn about teaching by actively observing someone else as a teacher, with special attention to how they utilize various pedagogical strategies, and to think and critically reflect about the experience and draw “lessons learned.”



- (3) Include the most recent syllabus from each course listed in Template D3-1, or written guidelines for any required elements listed in Template D3-1 that do not have a syllabus. If the syllabus does not contain a specific, detailed set of instructions for the assessment activity listed in Template D3-2, provide additional documentation of the assessment, e.g., sample quiz question, full instructions for project, prompt for written discussion post, etc.**

Syllabi are available on ERF D3.3.

- (4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: The mission of the DrPH program is to train the next generation of leaders in public health practice or practice-based research. For the latter, our DrPH program provides one of the most robust, analytically rigorous trainings for practice-based research. For the former, our practice-based leadership training can be strengthened through expansion of practice-based faculty and curriculum to equip our graduates with the tools, skills, and competencies they need for organizational, systems, and societal leadership.

Plan for Improvement: Presently, we are working to tackle several structural challenges of the DrPH program, from faculty mix to financial model. We believe these are solvable problems, but may take out-of-the-box thinking, such as addressing faculty requirements of dissertation committees and developing new partnerships for student financial support. We are consulting with various stakeholders—students, faculty, alumni, employers, as well as schools of public health that have undertaken similar transformations—to help guide the work of our DrPH transformation.

---

#### **D4. MPH and DrPH Concentration Competencies**

---

The school defines at least five distinct competencies for each concentration or generalist degree at each degree level. These competencies articulate the unique set of knowledge and skills that justifies awarding a degree in the designated concentration (or generalist degree) and differentiates the degree offering from other concentrations offered by the unit, if applicable. The list of competencies may expand on or enhance foundational competencies, but, in all cases, including generalist degrees, the competency statements must clearly articulate the additional depth provided beyond the foundational competencies listed in Criteria D2 and D3.

The school documents at least one specific, required assessment activity (e.g., component of existing course, paper, presentation, test) for each defined competency, during which faculty or other qualified individuals validate the student's ability to perform the competency.

If the school intends to prepare students for a specific credential (e.g., CHES/MCHES) that has defined competencies, the school documents coverage and assessment of those competencies throughout the curriculum.

- (1) Provide a matrix, in the format of Template D4-1, that lists at least five competencies in addition to those defined in Criterion D2 or D3 for each MPH or DrPH concentration or generalist degree, including combined degree options, and indicates at least one assessment activity for each of the listed competencies. Typically, the school or program will present a separate matrix for each concentration.

**Table D4.1.1 Assessments of Competencies for MPH in Environmental Health Sciences Concentration**

Competency	Course	Describe specific assessment opportunity
EHS MPH C1. Analyze how the sources and health effects of major environmental and occupational hazards are identified and assessed.	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b>	<b>Presentation:</b> Students present a 15-minute presentation on an environmental or occupational health topic, identifying a problem that needs an environmental health solution or policy that should be implemented, and contextualizing the topic within the larger set of sources and health effects of major environmental and occupational hazards. Students are responsible for developing discussion questions and facilitating class discussions on the topic of the day.
EHS MPH C2. Use the principles of exposure science to analyze environmental and occupational exposures.	<b>PB HLTH 270A: Exposure Assessment and Control I</b>	<b>Problem Sets 2 and 3:</b> Homework assesses students' ability to apply exposure science principles to an exposure.
EHS MPH C3. Identify factors that affect vulnerability of sub-populations to health effects of environmental and occupational exposures.	<b>PB HLTH 220C: Health Risk Assessment</b>	<b>Final Project Presentation:</b> A final project is presented in a small group. Teams of approximately three students will develop a 30-minute presentation on a risk assessment topic assigned in the first weeks of class. Each team prepares a presentation on the disease burden associated with their assigned chemical. Students present on who is most exposed to the chemical; exposure considerations specific to the chemical for various populations, including children; specific susceptible populations; uncertainty factors that authoritative entities use and rationale for doing so; degree of variation in assessment approach by authoritative bodies; and specific risk assessment steps taken to identify and protect susceptible subpopulations. Group members self-assess their contributions to group work.
EHS MPH C4. Use risk assessment and other methods to assess environmental health hazards and identify mitigative measures.	<b>PB HLTH 220C: Health Risk Assessment</b>	<b>Final Project Presentation:</b> A final project is presented in a small group. Teams of approximately three students will develop a 30-minute presentation on a risk assessment topic assigned in the first weeks of class. Each team prepares a presentation on the disease burden associated with their assigned chemical, employing and evaluating the four major components of risk assessment for the chemical—hazard identification, dose-response assessment, exposure assessment, and risk characterization. Group members self-assess their contributions to group work, and peer-assess contributions to the final presentation and semester-long project.

Competency	Course	Describe specific assessment opportunity
EHS MPH C5. Systematically analyze environmental health policies or regulations for their impact on population health or environmental justice.	<b>PB HLTH 271E: Science and Policy for Environmental Health</b>	<b>Policy Analysis:</b> Using Bardach's 8-Fold Path, students identify an environmental health policy problem and examine alternatives for addressing that problem. Students turn in three written, graded assignments (topics discussion; draft problem statement, research questions, and annotated bibliography; and sentence outline & preliminary data slides) that assess how the policy performs with respect to protecting population health and/or achieving health equity from an environmental justice lens.
EHS MPH C6. Explain how environmental protection and environmental health are promoted through basic principles and approaches of environmental policy development and implementation.	<b>PB HLTH 271E: Science and Policy for Environmental Health</b>	<b>Reading Response Memos:</b> Students develop response memos on course readings that cover the principles, approaches, science, politics, actors, and institutions that develop, shape and implement municipal, state and federal approaches to environmental protection or environmental health.
EHS MPH C7. Review and interpret prior research on an environmental health problem to identify knowledge gaps, articulate research questions, and describe appropriate methods to fill these gaps.	<b>PB HLTH 292: EHS Capstone Seminar</b>	<b>Concept Note:</b> Students draft a one- to two-page concept note to gain practice and experience reviewing and interpreting prior research on an environmental health problem, identifying and describing a specific knowledge gap, and defining a research question that would address the knowledge gap. Students detail the specific aims that would need to be achieved to answer the question, the methods that one would need to apply to achieve them, and the potential impact of answering the research question.

**Table D4.1.2 Assessments of Competencies for MPH in Epidemiology and Biostatistics Concentration (2-year MPH, 4+1 MPH, Online MPH)**

Competency	Course	Describe specific assessment opportunity
EPI/BIO MPH C1. Demonstrate methodological expertise for epidemiological research in choosing appropriate study designs, in calculating and interpreting measures of disease and association, in identifying and addressing sources of bias in studies, in estimating and interpreting confounding and effect measure modification, and in applying causal frameworks to the assessment of causality in associations.	<b>PB HLTH 250B: Epidemiologic Methods II (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Exams 1, 2, and 3:</b> Students demonstrate these competencies through calculation, short answer, and multiple choice questions on three midterms, and weekly problem sets. In Exam 2, students are asked about identifying study designs, choosing study designs appropriate for scientific questions, and pros and cons of different study designs (Q1 a) and b), Q3 a) through d)). In Exam 1, students are asked to calculate and interpret measures of disease and association (Q1, Q2, Q3). In Exam 2, students identify and discuss ways to address sources of bias (Q1 c) through f), Q4 b) and c), Q6 a) through c)). In Exam 2, students assess and adjust for confounding (Q2, Q4 e) through h), Q5). In Exam 3, students calculate effect measure modification (Q2, Q6). Causality is covered at the start of the course and causal frameworks are covered in Exam 1 (Q6, Q7, Q8). These concepts are further strengthened in the weekly lab discussion of the problem sets that address the same methodologic topics and the related articles.
	<b>PB HLTH W250B: Epidemiologic Methods II (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Quizzes 1-5:</b> Students demonstrate these competencies through calculation, short answer, and multiple choice questions on two exams, six quizzes, and six journal club assignments. In Quiz 3 and on the midterm exam, students are asked about identifying study designs, choosing study designs appropriate for scientific questions, and pros and cons of different study designs (Quiz 3 Q1.1). On Quiz 2 and on the midterm exam students are asked to calculate and interpret measures of disease and association (Quiz 2 Q9). In Quiz 4 and the final exam, students identify and discuss ways to address sources of bias (Quiz 4 Q1). In Quiz 4, students assess confounding, and in Quiz 5, students calculate effect measure modification, and on the final exam students estimate and interpret both confounding and effect measure modification (Quiz 5 Q1). Causality is covered at the start of the course and causal frameworks are first tested on Quiz 1 (Quiz 1 Q3). All of these concepts are further strengthened in group journal club discussion sections and assignments where these concepts are linked to published articles.

Competency	Course	Describe specific assessment opportunity
EPI/BIO MPH C2. Implement methods of data management and cleaning for epidemiologic data sets, including using SAS and/or R.	<b>PB HLTH 241: Intermediate Biostatistics for Public Health (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Assignments 2-6, 9-14:</b> Students demonstrate competencies in data management and cleaning using the R tidyverse packages during their assignments. In Assignment 2 (Q6), Assignment 3 (Q2, Q3), and Assignment 4 (Q1, Q4) students practice creating data frames, populating them, filtering rows, transforming columns, and making exploratory visualizations (scatterplots, empirical CDFs, histograms). In Assignment 5 (Q1, Q2), Assignment 6 (Q4), and Assignment 9 (Q1), students generate their own realistic epidemiological data to understand how these tools can be used to create simulations that assist with data analysis and evaluation of statistical methods. In Assignment 6 (Q5), students are asked to download and process parts of the NHANES dataset to perform inference on population prevalence of chest pain. In Assignments 10-14, students download, process, and analyze data from a real randomized trial. Weekly labs give students time to practice these skills collaboratively.
	<b>PB HLTH W241: Intermediate Biostatistics for Public Health (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Assignments 2-6, 9-14:</b> Students demonstrate competencies in data management and cleaning using the R tidyverse packages during their assignments. In Assignment 2 (Q6), Assignment 3 (Q2, Q3), and Assignment 4 (Q1, Q4) students practice creating data frames, populating them, filtering rows, transforming columns, and making exploratory visualizations (scatterplots, empirical CDFs, histograms). In Assignment 5 (Q1, Q2), Assignment 6 (Q4), and Assignment 9 (Q1), students generate their own realistic epidemiological data to understand how these tools can be used to create simulations that assist with data analysis and evaluation of statistical methods. In Assignment 6 (Q5), students are asked to download and process parts of the NHANES dataset to perform inference on population prevalence of chest pain. In Assignments 10-14, students download, process, and analyze data from a real randomized trial. Weekly labs give students time to practice these skills collaboratively.

Competency	Course	Describe specific assessment opportunity
EPI/BIO MPH C3. Recognize and conduct appropriate regression analysis techniques to analyze data from medical and other public health studies.	<b>PB HLTH 241: Intermediate Biostatistics for Public Health (Selective for Two- Year MPH, 4+1 MPH, Online MPH)</b>	<b>Assignments 7, 10-14:</b> Students demonstrate competency in the selection and application of appropriate regression techniques in the assignments. In Assignment 7 (Q4), students compare adjusted and unadjusted estimators in simulation to understand bias and variance and the impact of modeling assumptions. In Assignment 10 (Q5), students apply regression techniques to analyze randomized trial data and link coefficients to nonparametrically defined average treatment effects. The entirety of Assignments 11-14 deal with the construction and implementation of linear and logistic regression algorithms (with MLE and robust standard errors) as well as their use on randomized and observational data with focus on assessing violations of modeling assumptions that lead to bias and poor confidence interval coverage. Weekly labs give students time to practice these skills collaboratively.
	<b>PB HLTH W241: Intermediate Biostatistics for Public Health (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Assignments 7, 10-14:</b> Students demonstrate competency in the selection and application of appropriate regression techniques in the assignments. In Assignment 7 (Q4), students compare adjusted and unadjusted estimators in simulation to understand bias and variance and the impact of modeling assumptions. In Assignment 10 (Q5), students apply regression techniques to analyze randomized trial data and link coefficients to nonparametrically defined average treatment effects. The entirety of Assignments 11-14 deal with the construction and implementation of linear and logistic regression algorithms (with MLE and robust standard errors) as well as their use on randomized and observational data with focus on assessing violations of modeling assumptions that lead to bias and poor confidence interval coverage. Weekly labs give students time to practice these skills collaboratively.
EPI/BIO MPH C4. Interpret study findings including critically identifying strengths and limitations of individual studies.	<b>PB HLTH 250B: Epidemiologic Methods II (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Exams 1 and 2:</b> In lecture, problem sets and exams, interpretation of study findings from the published literature and from hypothetical study scenarios is assessed (Example questions: Exam 1, Q1 c, e, Q2 c, e, Q4 c, Exam 2, Q4 a. Identification of strengths and limitations of the individual studies from the published literature and from hypothetical study scenarios is also assessed (Example questions: Exam 1, Q2 f, g Q3 b, c, Exam 2, Q1 b, c, Q4 b, Q6 c).

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W250B: Epidemiologic Methods II (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<b>Journal Club Assignment 4, Question 1:</b> In group journal club discussion sections and assignments, class concepts are linked to published articles. Specifically, journal club assignment #4 asks about identifying sources of bias in a published cohort, case-control, and trial. Students also demonstrate their capacity to assess the strengths and limitations of real published studies on exams and quizzes. (Example: final exam question 4.6).
EPI/BIO MPH C5. Describe the history of epidemiology.	<b>PB HLTH 292: Epi MPH Seminar (fall) (2-year MPH, 4+1 MPH)</b>	<b>Group Presentation:</b> Students work in small groups to review pertinent literature and give 30-40 minute in class presentations providing the historical context, and current research, including heart disease, asbestos-related diseases, lung cancer, nutritional deficiency states such as pellagra, and infectious diseases, including measles, cholera, yellow fever, and polio, among others. The students field questions from faculty and other students and their presentations and responses to questions are assessed by two or more faculty for accuracy and completeness. In addition, feedback from the students comprising each group is solicited in a brief follow up meeting with the faculty member who is the instructor of record for the course (and present at all presentations), as well as by email, to assess whether all students in the group participated actively.
	<b>PB HLTH W250B: Epidemiologic Methods II (Online MPH)</b>	<b>Midterm Exam and Final Exam:</b> Students are assigned readings that review major contributors and significant achievements in epidemiology in Week 1. These include, for example: John Graunt (life tables and mortality), John Snow (cholera), James Lind (experimental studies around mortality), William Farr (determinants of population health), the British Medical Research Council and its streptomycin and tuberculosis trial, Doll and Hill studies on smoking and lung cancer, and the Framingham heart study. Additionally, the history of the development of ethics in clinical trials is covered in the Ethics module (Week 13), Students are assessed with questions on the midterm and final exams.



Competency	Course	Describe specific assessment opportunity
EPI/BIO MPH C6. List and explain the core principles underlying the ethics of human research (ie autonomy/respect for person; justice; beneficence; and non-maleficence).	<b>PB HLTH 292: Epi MPH Seminar (fall) (2-year MPH, 4+1 MPH)</b>	<b>Group Presentation:</b> Students work in small groups to review pertinent literature and give 30-40 minute class presentations providing ethical considerations related to studies of important health outcomes, including heart disease, asbestos-related diseases, lung cancer, nutritional deficiency states such as pellagra, and infectious diseases, including measles, cholera, yellow fever, and polio, among others. The students field questions from faculty and other students and their presentations and responses to questions are assessed by two or more faculty for accuracy and completeness. In addition, feedback from the students comprising each group is solicited in a brief follow up meeting with the faculty member who is the instructor of record for the course (and present at all presentations), as well as by email, to assess whether all students in the group participated actively.
	<b>PB HLTH W289: Interdisciplinary Seminar (Online MPH)</b>	<b>Week 3 Quiz:</b> The Ethics module covers ethical frameworks and human rights in international research. Students demonstrate their understanding of the three principles of the Belmont report (respect for persons, beneficence and justice) and how they apply in real world research settings. They learn how to use the human rights impact assessment for public health interventions. Students complete a quiz on the history, role, and functions of IRBs, including the Nuremberg Trials and examples of human subjects violations, Belmont Report principles, Human Subjects Research, informed consent, assent, and permission, and the Common Rule.

Competency	Course	Describe specific assessment opportunity
<p>EPI/BIO MPH C7. Apply specialized biostatistical methods for categorical and time-to-event outcomes to the analysis of advanced medical and epidemiological study designs.</p> <p><i>This competency will be effective for incoming Epidemiology/Biostatistics MPH students starting Fall 2023.</i></p>	<p><b>PB HLTH 252: Epidemiologic Analysis (Selective for 2-year MPH, 4+1 MPH, Online MPH)</b></p>	<p><b>Assignments 2-6:</b> Students use the R statistical software and appropriate packages within R to complete analyses with data that resembles data from a real-world epidemiological study. Assignment 2: Students apply generalized linear models to fit logistic regression to cohort and case-control study designs with binary outcomes, to estimate odds ratios and relative risks and their associated confidence intervals. Assignment 3: Students apply generalized linear models to estimate incidence density ratios/incidence rate ratios from count outcome data. Students also apply generalized linear models to estimate standardized measures of association for population-level inferences. Assignment 4 and 5: Students analyze a dataset using both semi-parametric (Cox) and fully-parametric (Weibull) models to estimate hazard ratios and time ratios to characterize an exposure-outcome relationship. Students must articulate assumptions required under these modeling frameworks (e.g., proportionality of the hazards) and present results accordingly. Assignment 6: Using study designs nested within an open cohort, students construct the appropriate study sample (density-sampled case-control and case-cohort), and identify the appropriate statistical model to analyze data. Students also select the optimal study design based on relative efficiency and study characteristics.</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W252: Epidemiologic Analysis</b> <b>(Selective for 2-year MPH, 4+1 MPH, Online MPH)</b>	<p><b>Assignments 2-6:</b> Students use the R statistical software and appropriate packages within R to complete analyses with data that resembles data from a real-world epidemiological study. Assignment 2: Students apply generalized linear models to fit logistic regression to cohort and case-control study designs with binary outcomes, to estimate odds ratios and relative risks and their associated confidence intervals. Assignment 3: Students apply generalized linear models to estimate incidence density ratios/incidence rate ratios from count outcome data. Students also apply generalized linear models to estimate standardized measures of association for population-level inferences. Assignment 4 and 5: Students analyze a dataset using both semi-parametric (Cox) and fully-parametric (Weibull) models to estimate hazard ratios and time ratios to characterize an exposure-outcome relationship. Students must articulate assumptions required under these modeling frameworks (e.g., proportionality of the hazards) and present results accordingly. Assignment 6: Using study designs nested within an open cohort, students construct the appropriate study sample (density-sampled case-control and case-cohort), and identify the appropriate statistical model to analyze data. Students also select the optimal study design based on relative efficiency and study characteristics.</p>

**Table D4.1.3 Assessments of Competencies for MPH in Epidemiology Concentration (11-Month MPH)**

These competencies will be effective for incoming 11-month Epidemiology MPH students starting Fall 2023. Prior to Fall 2023, the Epidemiology/Biostatistics concentration competencies #1-6 were applicable to 11-month Epidemiology MPH students.

Competency	Course	Describe specific assessment opportunity
EPI MPH C1. Demonstrate methodological expertise for epidemiological research in choosing appropriate study designs, in calculating and interpreting measures of disease and association, in identifying and addressing sources of bias in studies, in estimating and interpreting confounding and effect measure modification, and in applying causal frameworks to the assessment of causality in associations.	<b>PB HLTH 250B: Epidemiologic Methods II</b> (Selective for 11-Month MPH)	<b>Exams 1, 2, and 3:</b> Students demonstrate these competencies through calculation, short answer, and multiple choice questions on three midterms and weekly problem sets. In Exam 2, students are asked about identifying study designs, choosing study designs appropriate for scientific questions, and pros and cons of different study designs (Q1 a) and b), Q3 a) through d)). In Exam 1, students are asked to calculate and interpret measures of disease and association (Q1, Q2, Q3). In Exam 2, students identify and discuss ways to address sources of bias (Q1 c) through f), Q4 b) and c), Q6 a) through c)). In Exam 2, students assess and adjust for confounding (Q2, Q4 e) through h), Q5). In Exam 3, students calculate effect measure modification (Q2, Q6). Causality is covered at the start of the course and causal frameworks are covered in Exam 1 (Q6, Q7, Q8). These concepts are further strengthened in the weekly lab discussion of the problem sets that address the same methodologic topics and the related articles.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W250B: Epidemiologic Methods II (Selective for 11-Month MPH)</b>	<b>Quizzes 1-5:</b> Students demonstrate these competencies through calculation, short answer, and multiple choice questions on two exams, six quizzes, and six journal club assignments. In Quiz 3 and on the midterm exam, students are asked about identifying study designs, choosing study designs appropriate for scientific questions, and pros and cons of different study designs (Quiz 3 Q1.1). On Quiz 2 and on the midterm exam students are asked to calculate and interpret measures of disease and association (Quiz 2 Q9). In Quiz 4 and the final exam, students identify and discuss ways to address sources of bias (Quiz 4 Q1). In Quiz 4, students assess confounding, and in Quiz 5, students calculate effect measure modification, and on the final exam students estimate and interpret both confounding and effect measure modification (Quiz 5 Q1). Causality is covered at the start of the course and causal frameworks are first tested on Quiz 1 (Quiz 1 Q3). All of these concepts are further strengthened in group journal club discussion sections and assignments where these concepts are linked to published articles.
EPI MPH C2. Apply data analysis and programming techniques to epidemiologic investigations.	<b>PB HLTH 245: Introduction to Multivariate Statistics</b>	<b>Final Project (Real Data Analysis):</b> Students complete an analysis of a data set using one or more of the data analysis techniques discussed in the class. It is recommended that students use the data set for their MPH capstone. Deliverables: one-page project proposal and final project report which is five pages or less and includes tables and figures. The report is divided into seven sections: executive summary, background, problem (the question the student aims to address), data (summary of the data, study design, data collection), method (choice of model analytic method(s) and why), results (summary of numerical analysis, interpretation, assumptions check), and conclusion.
EPI MPH C3. Interpret study findings including critically identifying strengths and limitations of individual studies.	<b>PB HLTH 250B: Epidemiologic Methods II (Selective for 11-Month MPH)</b>	<b>Exams 1 and 2:</b> In lecture, problem sets and exams, interpretation of study findings from the published literature and from hypothetical study scenarios is assessed (Example questions: Exam 1, Q1 c, e, Q2 c, e, Q4 c, Exam 2, Q4 a. Identification of strengths and limitations of the individual studies from the published literature and from hypothetical study scenarios is also assessed (Example questions: Exam 1, Q2 f, g Q3 b, c, Exam 2, Q1 b, c, Q4 b, Q6 c).

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W250B: Epidemiologic Methods II (Selective for 11-Month MPH)</b>	<b>Journal Club Assignment 4, Question 1:</b> In group journal club discussion sections and assignments, class concepts are linked to published articles. Specifically, journal club assignment #4 asks about identifying sources of bias in a published cohort, case-control, and trial. Students also demonstrate their capacity to assess the strengths and limitations of real published studies on exams and quizzes. (Example: final exam question 4.6).
EPI MPH C4. Describe the history of epidemiology.	<b>PB HLTH 292: Epi MPH Seminar (fall)</b>	<b>Group Presentation:</b> Students work in small groups to review pertinent literature and give 30- to 40-minute in class presentations providing the historical context, and current research, including heart disease, asbestos-related diseases, lung cancer, nutritional deficiency states such as pellagra, and infectious diseases, including measles, cholera, yellow fever, and polio, among others. The students field questions from faculty and other students and their presentations and responses to questions are assessed by two or more faculty for accuracy and completeness. In addition, feedback from the students comprising each group is solicited in a brief follow up meeting with the faculty member who is the instructor of record for the course (and present at all presentations), as well as by email, to assess whether all students in the group participated actively.
EPI MPH C5. List and explain the core principles underlying the ethics of human research (ie autonomy/respect for person; justice; beneficence; and non-maleficence).	<b>PB HLTH 292: Epi MPH Seminar (fall)</b>	<b>Group Presentation:</b> Students work in small groups to review pertinent literature and give 30- to 40-minute class presentations providing ethical considerations related to studies of important health outcomes, including heart disease, asbestos-related diseases, lung cancer, nutritional deficiency states such as pellagra, and infectious diseases, including measles, cholera, yellow fever, and polio, among others. The students field questions from faculty and other students and their presentations and responses to questions are assessed by two or more faculty for accuracy and completeness. In addition, feedback from the students comprising each group is solicited in a brief follow up meeting with the faculty member who is the instructor of record for the course (and present at all presentations), as well as by email, to assess whether all students in the group participated actively.

Competency	Course	Describe specific assessment opportunity
EPI MPH C6. Apply epidemiologic approaches to social, medical, and public health programs to enhance students' related graduate professional work or goals.	<b>PB HLTH 299: Epi MPH Seminar (summer)</b>	<b>Paper:</b> Students write a three- to five-page paper discussing their interest in epidemiology and public health, why they decided to join the Epidemiology MPH program, and how it applies to their current professional work or doctoral studies. Students are also required to discuss their research interests for their capstone paper. A 15-minute summary presentation is required for the next summer seminar. This assignment is graded on a pass/no pass basis based on completeness and staying within the page and time guidelines.

**Table D4.1.4 Assessments of Competencies for MPH in Global Health and Environment Concentration**

Competency	Course	Describe specific assessment opportunity
GHE MPH C1. Analyze how the sources and health effects of major environmental and occupational hazards are identified and assessed.	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b>	<b>Presentation:</b> Students give a 15-minute presentation on an environmental or occupational health topic, identifying a problem that needs an environmental health solution or policy that should be implemented, and contextualizing the topic within the larger set of sources and health effects of major environmental and occupational hazards. Students are responsible for developing discussion questions and facilitating class discussions on the topic of the day.
GHE MPH C2. Use the principles of exposure science to characterize and understand environmental exposures in low- and middle-income countries	<b>PB HLTH 270A: Exposure Assessment and Control I</b>	<b>Problem Set 4:</b> Students complete a problem set applying principles of exposure science to problems explicitly relevant to LMIC contexts.
GHE MPH C3. Propose environmental health policies or regulations and analyze their potential impact on global population health.	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b>	<b>Policy/Technical Brief:</b> Students prepare a six- to eight-page technical or policy brief on a global environmental or occupational health topic among the many covered in the course. The goal of the brief is to identify and assess a global environmental or occupational health problem of significance, and analyze policies or regulations that would be appropriate for addressing the issue. Students demonstrate an understanding of the major factors that contribute to the global environmental or occupational health problem they have identified. Students will translate the scientific evidence on their topic for policy and make it understandable to policy- and decision-makers.
GHE MPH C4. Use an environmental justice lens to analyze disparities in exposures to environmental contaminants.	<b>PB HLTH 270A: Exposure Assessment and Control I</b>	<b>Problem Set 6:</b> Students complete a problem set focused on estimating disparities in exposure, and understanding the role of race and racism in their perpetuation.



Competency	Course	Describe specific assessment opportunity
GHE MPH C5. Review and interpret prior research on an environmental health problem to identify knowledge gaps, articulate research questions, and describe appropriate methods to fill these gaps.	<b>PB HLTH 292: EHS Capstone Seminar</b>	<b>Concept Note:</b> Students draft a one- to two-page concept note to gain practice and experience reviewing and interpreting prior research on an environmental health problem, identifying and describing a specific knowledge gap, and defining a research question that would address the knowledge gap. Students detail the specific aims that would need to be achieved to answer the question, the methods that one would need to apply to achieve them, and the potential impact of answering the research question.

**Table D4.1.5 Assessments of Competencies for MPH in Health and Social Behavior Concentration**

Competency	Course number	Describe specific assessment opportunity
HSB MPH C1. Distill and apply theory and empirical evidence to develop an implementable intervention or program plan to improve health, including literature review and logic model/theory of change.	<b>PB HLTH 205: Program Planning and Needs Assessment</b>	<b>Final Presentation:</b> Students work in groups to create a program plan for an organization. As part of the process, students do a resource-mapping exercise that includes identification of the multiple professions and systems necessary to address complex multidisciplinary problems. They will be assessed on their ability to integrate knowledge, methods and approaches including contributions from multiple professions presented in the statement of purpose of their program plan. The final presentation is intended to be an engaging presentation of the key points from the final client-ready plan. The grading rubric includes assessment on a scale of 0-10 that all members of the group play a meaningful part in the final presentation.
	<b>SOCWEL 251: Program Development (MSW/MPH Selective)</b>	<b>Individual Paper: Community Problem Identification:</b> Each student submits a paper that identifies, describes, and analyzes a social problem in a chosen geographic area of their interest. The paper should address some of the following questions: What is/are the problem(s) (e.g., definition)? Where did the problem occur (e.g., geographic boundaries and location)? Who was affected (e.g., the target population and its scope)? How did it happen (e.g., contributing factors)? What theoretical approaches (e.g., ecological theory) and/or conceptual framework (e.g., social determinant of health) that can be used to understand the problem?
HSB MPH C2. Evaluate the effects of community intervention programs or policies.	<b>PB HLTH 218B: Evaluation of Health and Social Programs</b>	<b>Independent Project: Alternative Evaluation Method:</b> Students (in groups of four to five) complete a full evaluation plan with specific outcomes, theory of change/logic model, and specification of an evaluation design, indicators, and metrics. An individual alternative evaluation assignment (10% of grade) will give students the opportunity to build off the group evaluation plan, with each student independently being assessed on a short alternative evaluation based on a different evaluation methodology not used in the group plan.

Competency	Course number	Describe specific assessment opportunity
HSB MPH C3. Respectfully develop and evaluate theory-informed interventions for governmental and/or non-governmental organizations to promote health.	<b>PB HLTH 205: Program Planning and Needs Assessment</b>	<b>Final Presentation:</b> In the final presentation, students explain how they worked with the organization, what approach(es) they used to gather information about the organization, their needs to design the program plan (even if this was only hypothetical), and what that experience was like (at least one thing that went well, and at least one lesson learned). The grading rubric includes assessment on a scale of 0-10 that all members of the group play a meaningful part in the final presentation.
	<b>SOCWEL 251: Program Development (MSW/MPH Selective)</b>	<p><b>Development of Theory-informed Community Intervention:</b> Once the community problem(s) has/have been defined, an important next step for community practitioners is to identify service gaps in the existing service delivery system and to develop appropriate programs to address the problem accordingly. Two specific tasks are: 1) to conceptualize, identify and analyze service needs and capacities, and 2) to design and develop intervention strategies. The final assignment of the course is a group project that integrates social science theories, problem analysis, needs and capacity assessment, program planning and design, service delivery, and evaluation. Dealing with a specific social problem in a chosen community, the assignment is to organize a Task Force to prepare a proposal that could potentially be submitted for outside funding.</p> <p><b>Individual Self-Reflection Paper on Proposal:</b> Each student submits an electronic copy of a self-reflection paper that: 1) describes your involvement, contributions and lessons learned throughout the process of the development of the proposal. Based on your experience, you are most welcome to make specific recommendations for the facilitation of effective learning in the future; 2) contributes one item of FAQ (both question and answer) on a particular issue that is most important to you pertaining to the nuts and bolts of working on the project.</p>

Competency	Course number	Describe specific assessment opportunity
<p>HSB MPH C4. Identify ethical challenges and principles for guiding public health planning, implementation and evaluation.</p>	<p><b>PB HLTH 218B: Evaluation of Health and Social Programs</b></p>	<p><b>Assignment 4 - Final Evaluation Plan:</b> Students are required to assess ethical issues relevant to their evaluation. Questions to consider include: What ethical considerations do you need to take into account? Will consent be needed? If so, what process will you use to gather consent? Will you seek review by CHR/IRBs, boards, other organizations? Why or why not? What are the risks/benefits of participating in the evaluation? How will risks be mitigated (e.g. maintaining confidentiality)?</p> <p><b>Week 10 Discussion Post Prompt:</b> Students are required to post their responses to the following prompt on the bcourses discussion board (2% of grade): How does your evaluation adhere to ethical standards set by American Evaluation Society Guiding Principles (systemic inquiry, competence, integrity, respect for people, and common good and equity). We have covered these principles throughout the course, this should be a paragraph or two reflecting on your position as evaluators.</p>
<p>HSB MPH C5. Apply critical social analysis to issues of race and ethnicity, gender and sexuality, economic status, colonialism and other important axes of difference and power as they impact health and public health practice.</p>	<p><b>PB HLTH 203A: Theories of Health and Social Behavior</b></p>	<p><b>Reading Response Forum Posts for any of the following weeks:</b></p> <ul style="list-style-type: none"> <li>- Week 7: Moving beyond the individual Part II: Structural Violence, Political Economy, The SES gradient</li> <li>- Week 8: Race, Racism, and the Biologization of Difference in the Population</li> <li>- Week 9: Intersectionality and Critical Race Theory</li> <li>- Week 10: Sex and Gender Beyond the Binary</li> <li>- Week 12: Culture, Acculturation, and Cultural Health Capital</li> <li>- Week 13: Colonialism and decolonizing approaches</li> </ul> <p>Reading Response Forum Posts should include the following elements: concise description of key concepts and argument of all readings, description of interconnections and differences among the readings, and application of a concept, theory, or combination of perspectives to a topic relevant to the student.</p>

Competency	Course number	Describe specific assessment opportunity
HSB MPH C6. Apply key social scientific approaches to understanding racism and developing anti-racist and intersectional approaches to public health.	<b>PB HLTH 203A: Theories of Health and Social Behavior</b>	<p><b>Reading Response Forum Posts for any of the following weeks:</b></p> <ul style="list-style-type: none"> <li>- Week 1: Introductions: Lecture defines anti-racism as a scholarly, ethical, and political approach to practicing public health</li> <li>- Week 2: Theory in Health and Social Behavior: bell hooks' approach to anti-racism</li> <li>- Week 3: Health social movements: Who holds the power to make change? Readings, lecture, and discussion cover how anti-racist social movements have influenced public health.</li> <li>- Week 8: Race, Racism, and the Biologization of Difference in the Population Readings, lecture, and discussion define racism and anti-racism in scientific research.</li> <li>- Week 9: Intersectionality and Critical Race Theory Define critical race theory and intersectionality as a theoretical approaches to practicing anti-racist public health.</li> <li>- Week 10: Sex and Gender Beyond the Binary Readings, lecture, and discussion consider intersectional approach understanding racism and gendered differences.</li> <li>- Week 13: Colonialism and decolonizing approaches Readings, lecture, and discussion cover the intersections of colonialism and racism in public health, and consider decolonial/anti-racist alternatives.</li> </ul> <p>Reading Response Forum Posts should include the following elements: concise description of key concepts and argument of all readings, description of interconnections and differences among the readings, and application of a concept, theory, or combination of perspectives to a topic relevant to the student.</p>

Competency	Course number	Describe specific assessment opportunity
HSB MPH C7. Apply a trauma-informed lens to public health research and practice.	<b>PB HLTH 203A: Theories of Health and Social Behavior</b>	<p><b>Reading Response Forum Posts for any of the following weeks:</b></p> <ul style="list-style-type: none"> <li>- Week 11: Trauma and trauma-informed approaches Lecture, reading, and discussion cover a public health approach to trauma-informed practice, that understands and addresses trauma at the community level.</li> <li>- Week 13: Colonialism and decolonizing approaches Lecture, reading, and discussion investigate how colonialism includes collective trauma, and how decolonizing approaches entail a reckoning with historical and ongoing structures of trauma.</li> </ul> <p>Reading Response Forum Posts should include the following elements: concise description of key concepts and argument of all readings, description of interconnections and differences among the readings, and application of a concept, theory, or combination of perspectives to a topic relevant to the student.</p>

**Table D4.1.6 Assessments of Competencies for MPH in Health Policy and Management**

Competency	Course	Describe specific assessment opportunity
<b>MANAGEMENT CLUSTER</b>		
HPM MPH C1. Apply skills in collaboration, coaching and influencing to achieve organizational, policy or strategic initiative goals	<b>PB HLTH 223C: Strategic Management in the Health Sector</b>	<b>Sutter Negotiation Exercise:</b> Students role play a negotiation/mediation session (team vs. team) and will apply influence and collaboration skills to seek optimal and mutually agreeable outcomes. Afterward, each student will memorialize their outcomes and reflection on what they learned via a two- to three-page paper that includes the (a) full/partial outcome, (b) assessment of how they and their team performed, (c) how personal negotiating style factored into how they played their assigned role, (d) what it was like to have a diverse group at the table, managing across different professions and lens - how did you contribute to fostering an inclusive climate, and (e) any opportunities for improvement.
	<b>PB HLTH W223C: Strategy in Healthcare Organizations</b>	<p><b>Week 5 Discussion Questions:</b> Week 5 discussion questions applies readings/lecture content on influence and the five roles of a leader as coach in organizational change by asking: What are the greatest barriers to change in your own organization? Describe how you might use a few of Switch's tactics and/or effective Diversity, Equity, Inclusion &amp; Belonging (DEIB) strategies to improve your own management of change.</p> <p><b>Week 6 Discussion Questions:</b> Week 6 discussion questions apply readings on execution and managing success (inclusive of collaboration and influence) by asking: In your experience, what are some factors that have led to the failure of strategic efforts? How might those failures have been avoided? And What are some of the ways in which organizations can align employee behaviors or activities to support strategic goals attainment?</p>
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care</b>	<b>Written Assignment 3 - Teamwork Case:</b> This case study analysis covering the competencies of collaboration, coaching, and influencing requires students to put themselves in the position of a healthcare consultant for a large health care system. The health system is trying to translate lessons on implementing a team-based approach to complex care management that was successfully implemented in a pilot medical center to a health care system in Northern California. In the case analysis, students must provide recommendations to leadership on how to implement the team-based approach to help control inpatient spending for clinically vulnerable older adult patients using theories and evidence presented in the course. The students

Competency	Course	Describe specific assessment opportunity
		<p>also analyze organizational climate data related to the learning environments of the medical center in the underserved region and develop strategies to help leaders manage professional conflicts that present implementation barriers in the case. Individual contributions to the group project will be assessed through confidential peer- and self-evaluations of the team project process in Week 8.</p> <p><b>Team Project:</b> The course includes a team-based simulation that threads throughout the term. The case requires the students to work as a consulting team and collaborate to provide analyses and recommendations to a large health care system to improve performance on an assigned indicator (financial, operational, or quality indicator). The consulting team provides their analyses and recommendations in a final team presentation.</p>
HPM MPH C2. Evaluate and select options for effective diffusion of innovation within a healthcare organization	<b>PB HLTH 223C: Strategic Management in the Health Sector</b>	<p><b>Week 13 Exercise:</b> The in-class exercise in Week 13 (Innovation as Strategic Competency) covers innovation diffusion in healthcare settings and includes scenarios where students discuss different techniques to make innovation more "sticky" and sustained.</p> <p><b>Group Strategy Project:</b> As part of the implementation plan component of the client project, students must consider how best to support innovative technology adoption. The final group project includes a student self and team assessment of performance.</p>
	<b>PB HLTH W223C: Strategy in Healthcare Organizations</b>	<p><b>Week 4 Discussion Questions:</b> Students are asked to demonstrate their understanding of lectures/readings on innovation in response to the following questions/prompts: 1) Using an organization you are familiar with, outline the considerations they ought to make when determining whether and how to grow. 2) What are some of the major organizational barriers to creativity and approaches for overcoming them? 3) What can you do to promote greater creativity in your organization?</p> <p><b>Week 4 Case Study:</b> Students are asked to demonstrate their understanding of lectures/readings on innovation by reviewing a Maven Women's Health scenario and proposing recommended innovations for growth and sustainable partnerships, with the questions being: 1) How would you counsel (Maven's CEO) about the decision to grow the share of enterprise clients? 2) The case study considers the potential to partner with health plans as an option for growth. If you were a health plan executive, what would you consider if approached by Maven with the opportunity for partnership?</p>



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care</b>	<b>Final Exam - Category 3:</b> Students read about and discuss the "diffusion of innovation" framework and how it can be used to segment departments/units/individuals within a healthcare organization in the context of implementing a care delivery innovation, e.g., remote monitoring technology, a new team-based approach, etc. In the final exam, one of the five exam questions assess spread and diffusion of innovation.
HPM MPH C3. Utilize an inclusive approach to management decision making	<b>PH 223C Strategic Management and Health Sector</b>	<p><b>Midterm Exam - Question Q3.c:</b> In Week 2 on Culture/DEI, there are readings and a group discussion with outside experts on DEI and the benefits of adopting an inclusive approach. The midterm exam includes one question about methods to support being more inclusive and representative of a diverse population.</p> <p><b>Group Strategy Project:</b> Students initially complete a formal collaborative plan as an intermediate deliverable for the client projects that asks them to walk through how they will make decisions inclusively as a group.</p>
	<b>PB HLTH W223C: Strategy in Healthcare Organizations</b>	<p><b>Team Formation Worksheet:</b> Students establish behavior norms for their group, including their decision-making approaches (what consensus means, what their process will be), how they will address conflicts that arise, and leveraging each team member's strengths in assigning aspects of the project.</p> <p><b>Week 5 Discussion Questions:</b> What are the greatest barriers to change in your own organization? Describe how you might use a few of Switch's tactics and/or effective Diversity, Equity, Inclusion &amp; Belonging (DEIB) strategies to improve your own management of change.</p> <p><b>Week 7 Discussion Questions:</b> Reflecting on your professional experience during the COVID-19 pandemic, what did your organization do well to address the crisis? What might it have done better? Given current circumstances, what specific plan of action would you recommend leadership undertake moving forward?</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 224A: Organizational Behavior and Management in Health Care</b>	<b>Final Exam - Category 5:</b> The course includes two sessions on organization learning, participatory decision-making, and psychological safety among health care workers. Two required readings focus on building learning organizations and learning from failure in organizations. As part of the two sessions focused on human resources management in health care, students engage in discussions focused on improving diversity, equity and inclusion for frontline workers through career ladders and fair / equitable wages. The sessions introduce students to strategies for effectively working with unions and represented employees. The final exam includes one question to assess human resource management and organizational learning competencies.
<b>FINANCE CLUSTER</b>		
HPM MPH C4. Analyze financial statements, cost and managerial information to assess and promote the financial health of a unit, organization, or system	<b>PB HLTH W227A: Healthcare Finance</b>	<b>Homework 1:</b> This individual case study assignment relates to the lectures and readings/visuals on financial statements and assessing financial health of a healthcare organization. Students review the financial statements and select operating data on “StayWell Community Hospital,” a full-service acute care hospital that is part of a larger not-for-profit health system. Students evaluate the hospital’s current situation using trended and comparative ratio analysis. Students will then compare/benchmark those outputs to three other California hospitals/health systems (of their choosing) and state-wide metrics.

Competency	Course	Describe specific assessment opportunity
<p>HPM MPH C5. Apply analytic tools and techniques to make sound short and long-term investment decisions within a health care environment</p>	<p><b>PB HLTH W227A: Healthcare Finance</b></p>	<p><b>Homework 2:</b> Class sessions cover cost behaviors, CVP analysis, and budgeting/forecasting. In Homework 2, students assume the role of an analyst in a performance excellence (internal consulting) group in a health system called High-Quality Health (HQH). The system is trying to expand its reach and improve primary care access to drive more volume to its facilities. HQH is considering the purchase of a small group of local primary care physicians (mix of internal medicine and family practice doctors) Prime Practice, who have recently expressed interest in becoming an employed group for HQH. The VP of Strategy at HQH feels it would be unlikely for the system to go over \$4-5M to acquire the group but wants to better understand the opportunity. She needs you to do some analysis to support a preliminary decision around the deal and a target purchase price range. Students will first review the historical practice data provided so that you better understand the revenues and associated costs. Students will then conduct growth trend and cost-volume-profit (CVP) analyses to help assess how the practice is currently performing. Using this information, students will then construct a five-year budget/forecast of Prime Practice's operating cash flows. Students will then conduct a simple payback analysis to get a very rough assessment of the deal. The system will continue on with a more rigorous forecast and Net Present Value calculation down the road if this initial effort indicates the deal is worth that effort.</p> <p><b>Final Individual Project:</b> Using many of the techniques students have been shaping in the class, students will look at the decision on whether to invest in a new venture for a medium-size not-for-profit community hospital. They are looking for new revenue streams to complement existing services and are considering adding a CyberKnife to their outpatient radiation therapy service line. Students will develop a 10-year cash flow forecast/NPV and make recommendations on whether they think the deal is worth pursuing further. A key part of the Cyberknife analysis will be the revenue assumptions and best practices would mean also doing some sensitivity analysis around key variables such as different price points, market share (volume of cases done in the hospital), and utilization per patient cases.</p>

Competency	Course	Describe specific assessment opportunity
<b>POLICY CLUSTER</b>		
HPM MPH C6. Examine dynamics in the design, adoption, or implementation of health policies	<b>PB HLTH 222A: Biomedical Innovation Policy</b>	<b>Individual Written Assessment - Regulation and Reimbursement:</b> Paper analyzing pharmaceutical market authorization regulation by FDA and insurance coverage policy by CMS (Medicare), and in particular, the policy of accelerated review with lower evidentiary requirements. Weekly written reflections on class readings and lectures.
	<b>PB HLTH W222A: Biomedical Innovation Policy (online)</b>	<b>Individual Written Assessment - Health Technology Assessment:</b> Students will write a paper analyzing health technology assessment policy in the U.S. and European nations, including their purpose, development, and implementation challenges.
	<b>PB HLTH 220: Health Policy Decision Making</b>	<b>Weeks 2 and 3 Reading Check Assignments:</b> Students provide short answers to substantive questions regarding the design, formation, and implementation of the major policies that govern U.S. health insurance and healthcare systems.  <b>Weeks 2 and 3 Student-led Discussion:</b> Throughout the course, each student participates in student-led discussions. One week of the course, students are assigned to lead a discussion group. As discussion leaders, a group of students must identify design, adoption, and implementation content in order to develop an exercise that will highlight this content for the class.
	<b>PB HLTH 271E: Science and Policy for Environment and Health</b>	<b>Reading Response Memos - Mechanisms I: Command &amp; Control in Air and Mechanisms II: Command and Control in Toxics:</b> Students write one- to two-page memos identifying and engaging with readings that describe dynamics in design, adoption and implementation of environmental health policies.  <b>Student-Led Discussions - Mechanisms I: Command &amp; Control in Air and Mechanisms II: Command and Control in Toxics:</b> Each week students participate in student-led discussion. As discussion leaders, a group of students must identify design, adoption, and implementation content in assigned readings in order to develop an exercise that will highlight this content for the class.

Competency	Course	Describe specific assessment opportunity
	<b>PH220E: Global Health Policy</b>	<p><b>Group Project:</b> Students use Bardach's Eightfold Path for Policy Analysis to explore and assess different policy alternatives for a specific health challenge. They do this four times for four different case simulations. As examples, for the first case simulation of the class, students decide between different approaches to design a new global pandemic financing facility. For the third simulation, students examine different policy alternatives to implement a conditional cash transfer program that includes health conditionalities in Vietnam.</p> <p><b>Individual Assessments:</b> Each case includes an individual assessment, in which students will be expected to synthesize the learnings from their case decks and persuade the client of their group's key recommendations. For the first case they submit a written memo, for the second and third they submit video memos, and for the fourth an in-person presentation.</p>
	<b>PB HLTH W220M: Health Policy Methods</b>	<b>Discussion Posts - Weeks 1-7:</b> Students complete weekly written assessments (discussion posts) analyzing the formulation, implementation and modification of health policies throughout the U.S. Students analyze the challenges and opportunities that arise throughout these three phases of health policy, as well as those of communicating these intersectional and complex dynamics to specific audiences through varied policy deliverables.
	<b>PB HLTH 220D: Health Policy Advocacy</b>	<b>Power Mapping Exercise:</b> Students use this Power Mapping Exercise to compare the advantages and disadvantages of a policy-making forum. They first get into teams and discuss, and then identify a policy-making forum that has the greatest likelihood of success for adoption and implementation of a proposed solution. There are interim assessments that students complete in teams. In the workshop round table at the end of the first and the second classes, students report their definition of the problem using data and stories. This overall assignment is described on page 3 and the power mapping on pages 5 to 6 in the syllabus. A confidential peer and team evaluation as part of group project assessment will be added in the Spring 2023 course.
HPM MPH C7. Analyze policies for their impact on health and health equity	<b>PB HLTH 222A: Biomedical Innovation Policy</b>	<b>Individual Policy Assignment- Audit of Algorithm for Diagnostic Tests:</b> This assignment is described on page 4 of the syllabus: Audit of machine learning-based algorithm for diagnosis, in terms of potential biases that would aggravate the errors and inequities in the current health system.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W222A: Biomedical Innovation Policy (online)</b>	<b>Individual Policy Assignment- Audit of Algorithm for Diagnostic Tests:</b> This assignment is described on page 4 of the syllabus: Audit of machine learning-based algorithm for diagnosis, in terms of potential biases that would aggravate the errors and inequities in the current health system.
	<b>PB HLTH 220: Health Policy Decision Making</b>	<p><b>Reading Checks:</b> Students are assessed on reading comprehension through quizzes on assigned readings requiring short answers to specific questions, including assessment of performance of particular policy reforms across equity, cost, quality and access.</p> <p><b>Group Presentation:</b> Using Bardach's 8-Fold Path policy analysis method, students, in small groups, identify a health policy problem and examine alternatives for addressing that problem, including an assessment on how the policy performs with respect to health equity and health disparities.</p>
	<b>PB HLTH 271E: Science and Policy for Environment and Health</b>	<b>Group Project:</b> Using Bardach's 8-Fold Path, students, in small groups, identify an environmental health policy problem and examine alternatives for addressing that problem, including an assessment of how the policy performs with respect to addressing health equity from an environmental justice lens. Each student completes an assessment identifying their individual contributions to the group policy analysis.
	<b>PB HLTH 220E: Global Health Policy</b>	<p><b>Group Project:</b> Groups use cost-effectiveness analysis in the second case simulation of the course, specifically around what services should be included in a new Universal Health Coverage insurance program. Students apply economic concepts such as opportunity costs, discounting, revealed preferences, and are exposed to the different approaches to valuing life and health. They are expected to consider both the total health benefit (impact on health) and health equity in their recommendations.</p> <p><b>Individual Assessment:</b> Each individual student is required to upload a video memo meant to serve as an elevator pitch to the Ministry of Health introducing their team's submitted deliverables and highlighting the analyses conducted to reach the proposed recommendations.</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W220M: Health Policy Methods</b>	<b>Practice Project:</b> Using Bardach's 8-Fold Path policy analysis method, students analyze health disparities in communities experiencing homelessness in the U.S. and the health policies designed to close these gaps. Student are assessed on their participation in this project, specifically on their research, analysis and critical thinking skills as they study the equitable and inequitable impacts of health policies and navigate the challenges of health policy decision-making as future leaders in this sector. Students are graded on three team memos and an individual reflection memo.
	<b>PB HLTH 220D: Health Policy Advocacy</b>	<b>Advocacy Plan:</b> Students describe a policy problem in need of a solution. They identify stakeholders and examine policy solutions in terms of impact on health outcomes and likelihood of adoption and implementation, as well as strength of opposition. They then analyze the strategies of how to overcome this opposition to arrive at the best possible solution to achieve health equity. They report their findings in both, an oral presentation to the class, and a final written report.
HPM MPH C8. Understand how to use advocacy tools to change health policy	<b>PB HLTH 222A: Biomedical Innovation Policy</b>	<b>Individual Written Assessment - Novel Antibiotics:</b> Paper designing policy mechanism for supporting R&D for new antibiotics effective against drug-resistant infections, including both push and pull mechanisms. Weekly written reflections on class readings and lectures.
	<b>PB HLTH W222A: Biomedical Innovation Policy (online)</b>	<b>Individual Written Assessment - Novel Antibiotics:</b> Paper designing policy mechanism for supporting R&D for new antibiotics effective against drug-resistant infections, including both push and pull mechanisms. Weekly written reflections on class readings and lectures.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 220: Health Policy Decision Making</b>	<p><b>Op Ed:</b> Students compose an op ed on a health policy topic to raise awareness around an issue or to argue for a specific policy change. In a preparation assignment, students draft an op ed and work in pairs in class to provide peer feedback helpful in completing the final op ed. The op ed assignment requires students to learn basic skills in writing op eds and to consider how best to advocate for the issue/position they argue.</p> <p><b>Group Presentation:</b> Using Bardach's 8-Fold Path, students, in small groups, identify a health policy problem and examine alternatives for addressing that problem. The group policy assignment requires students to endorse a specific policy approach defending that selection with empirical and value-based reasoning required in policy advocacy.</p>
	<b>PB HLTH 271E: Science and Policy for Environment and Health</b>	<p><b>Group Project:</b> Using Bardach's 8-Fold Path, students, in small groups, identify an environmental health policy problem and examine alternatives for addressing that problem. The group policy assignment requires students to endorse a specific policy approach defending that selection with empirical and value-based reasoning required in policy advocacy. The assignment builds on in-class workshops developing policy memo writing skills requiring evidence-based and value based arguments for addressing environmental harms. Each student completes an assessment identifying their individual contributions to the group policy analysis.</p>
	<b>PB HLTH 220E: Global Health Policy</b>	<p><b>Group Project:</b> Students use strategic planning and advocacy tools to work in teams to navigate a complex policy landscape for family planning. They are tasked with providing recommendations for the adoption of a digital health app for which they must understand the range of factors that influence health policy, including ethical questions, equity, political constraints, religious preferences, centralized vs. decentralized decision-making, public mistrust, and more. One of the key deliverables in this case simulation is to advocate for the adoption of this digital intervention by the government. The students are expected to develop advocacy talking points as part of their deliverable.</p> <p><b>Individual Assessment:</b> Each case also uses an individual assessment, either a written memo, a video memo, or an oral presentation.</p>



Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W220M: Health Policy Methods</b>	<b>Final Project:</b> Using Bardach's 8-Fold Path policy analysis method, students analyze health disparities in any community in the U.S for their final policy analysis project. Students work in teams to prepare a complete policy analysis in the form of one memo, a draft slide deck, the final oral presentation and accompanying slide deck, and a Q&A on their project. In this project, teams advocate for their policy recommendation to be adopted by a specific audience that can implement their recommendations. Individual contributions to the group project will be assessed through individual discussion posts. Following completion of the group project, each member of the group gets assigned to watch two presentations of other groups' work and post thoughtful questions drawing from the course material about these final projects. Based on these questions, each student will receive up to four points, representing his/her individual work effort toward this assignment.
	<b>PB HLTH 220D: Health Policy Advocacy</b>	<b>Advocacy Plan:</b> Students use planning, strategy, and verbal skills to create a final report and a team oral presentation. Students describe advocacy tools that they intend to use in their campaign to convince an audience to join the coalition that is consistent with their organization's mission. This includes problem definition and the elements of policy advocacy: data and stories, building support, community organizing, and coalition building, as well as power mapping, planning strategy, and identifying policy-making forums.
<b>ECONOMICS CLUSTER</b>		
HPM MPH C9.Utilize economic theory to assess the efficiency and equity of current and proposed health policies	<b>PB HLTH 226A: Health Economics</b>	<p><b>Paper:</b> Paper analyzing "lemons" model of adverse selection and its applicability to three principal forms of insurance, including individually-purchased coverage, employment-based group insurance, and tax-funded governmental programs. The paper addresses equity in access to insurance for disadvantaged populations including low income populations but especially vulnerable populations with high illness burden and strong need for care.</p> <p><b>Final Exam - Section I, Question D:</b> Final Exam essay question on models of bounded rationality and behavioral economics and their implications for insurance design.</p>

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH W226A: Health Economics</b>	<b>Week 1 Discussion and Problem Set 1:</b> Discussion prompt and problem set assess the students' understanding of efficiency and equity concepts within health and health care. Week 1 discussion prompt focuses on the tradeoff between efficiency and equity. The assignment is part of a group discussion, but each student writes an individual response. Problem Set 1 includes questions about efficiency (Section 4: Productive and Allocative Efficiency, Questions 19-25).
	<b>PB HLTH 226C: Economics of Population Health</b>	<b>Group project:</b> Conduct an economic analysis of a population health policy or intervention, in which students must interpret the efficiency and equity implications of their results. Students evaluate every member of their team by assigning points reflecting each person's relative contribution to the group.
	<b>PB HLTH W226C: Economics of Population Health</b>	<b>Group Project:</b> Conduct an economic analysis of a population health policy or intervention, in which students must interpret the efficiency and equity implications of their results. Students evaluate every member of their team by assigning points reflecting each person's relative contribution to the group.
HPM MPH C10. Analyze the role of incentives in shaping behaviors of health sector stakeholders	<b>PB HLTH 226A: Health Economics</b>	<b>Final Exam - Section II:</b> Long-form question on economic theories of overinvestment and underinvestment in pharmaceutical research and development, with resulting impacts on the pace of innovation.
	<b>PB HLTH W226A: Health Economics</b>	<b>Problem Set 3 - Questions 1-10:</b> The final exam and problem sets assess students' understanding of how incentives shape behaviors of key stakeholders, including patients, healthcare providers, healthcare firms, and governments.
	<b>PB HLTH 226C: Economics of Population Health</b>	<b>Reading Journal:</b> Four weeks of class focus on incentive effects on behavior, and in each of those weeks students are required to complete graded (with a rubric) reading journal entries reflecting on the material.
	<b>PB HLTH W226C: Economics of Population Health</b>	<b>Final Exam - Incentives Questions:</b> Students answer multiple choice and short-answer questions, including on neoclassical and behavioral economic analyses of incentive effects on demand-side and supply-side behaviors.

**Table D4.1.7 Assessments of Competencies for MPH in Infectious Diseases and Vaccinology Concentration**

Competency	Course	Describe specific assessment opportunity
IDV MPH C1. Apply the following frameworks of principles of infectious disease to describe each infectious disease: microbiology, epidemiology, clinical spectrum, immunology, pathogenesis, treatment, and prevention.	<b>PB HLTH 260A: Principles of Infectious Disease</b>	<b>Midterm and Final Exams:</b> The midterms are a set of multiple choice and short-answer questions that follow an infectious disease case scenario (Midterm Exam 1 Questions 1-50, Midterm Exam 2 Questions 1-50). The final exam will cover topics discussed after the second midterm and will be formatted similarly to the midterms. There are questions that cover the five core principles of infectious disease principles emphasized during the course (Final Exam Questions 1-67).
	<b>PB HLTH 263: Public Health Immunology</b>	<b>Final Exam:</b> Students respond to questions that address fundamental concepts in innate and adaptive immunity and their role in protective and pathological processes of infectious diseases. Students also evaluate one of two papers from the primary immunology literature.
IDV MPH C2. Describe the major viral, bacterial, fungal, and parasitological agents of infectious diseases of humans and the nonhuman animal sources of some of these infectious agents.	<b>PB HLTH 260A: Principles of Infectious Disease</b>	<b>Midterm and Final Exams:</b> Students will be assessed on their ability to describe the major viral, bacterial, fungal and parasitological agents of infectious diseases of humans and the nonhuman animal sources of some of these infectious agents. The midterms are a set of multiple choice and short-answer questions that follow an infectious disease case scenario (Midterm Exam 1 Questions 1-50, Midterm Exam 2 Questions 1-50). The final exam will cover topics discussed after the second midterm and will be formatted similarly to the midterms. There are questions that cover the five core principles of infectious disease principles emphasized during the course (Final Exam Questions 1-67).
IDV MPH C3. Discuss how infectious diseases impact public health problems.	<b>PB HLTH 260A: Principles of Infectious Disease</b>	<b>Midterm and Final Exams:</b> The midterms are a set of multiple choice and short-answer questions that follow infectious disease case scenarios (Midterm Exam 1 Question 36). The final exam will cover topics discussed after the second midterm and will be formatted similarly to the midterms. There are questions that cover the impact of infectious diseases on noncommunicable disease public health (Final Exam Questions 68, 69, 71, 73, 74).

Competency	Course	Describe specific assessment opportunity
IDV MPH C4. Describe how the social, behavioral, environmental, and administrative/policy components of public health affect infectious disease occurrence and distribution.	<b>PB HLTH 260A: Principles of Infectious Disease</b>	<b>Midterm and Final Exams:</b> The midterms are a set of multiple choice and short-answer questions that follow infectious disease case scenarios (Midterm Exam 1 Questions 34, 35, 38). The final exam will cover topics discussed after the second midterm and will be formatted similarly to the midterms. Exams include problem sets and general knowledge questions that cover the social, behavioral, environmental, and administrative/policy components of public health affecting infectious disease occurrence and distribution (Final Exam Questions 4, 16, 19, 77, 79).
IDV MPH C5. Discuss how infectious disease surveillance systems are used to detect, control, and prevent outbreaks, and how they are used to study modes of infectious disease transmission, predict trends, and monitor response to interventions.	<b>PB HLTH 253B: Epidemiology and Control of Infectious Diseases</b>	<b>Quiz 1:</b> Week 5 lecture and readings cover public health surveillance, and Week 6 lecture and readings cover ecological analysis strategies for surveillance data. In quiz assignments, students are asked to synthesize concepts learned about the natural history, transmission, and control of infectious disease agents as well as study designs for addressing these aspects of infectious disease epidemiology (including surveillance/ecological, observational, and randomized trial designs) via short-answer written responses.
IDV MPH C6. Assess different epidemiological, statistical, or computational biological methodologies and assessment techniques to analyze infectious disease modes of transmission and risk factors.	<b>PB HLTH 253B: Epidemiology and Control of Infectious Diseases</b>	<b>Research Paper:</b> Students are required to prepare a research paper during the semester which may take either of two forms: 1) Quantitative analysis of data on an infectious disease topic of their choosing. Topics addressing disease burden estimation, spatial and temporal trends or predictors of incidence/prevalence, and the effectiveness or impact of interventions are all appropriate. The output of this work should be a final report in the style of a peer-reviewed journal manuscript including the following sections: Abstract, Introduction, Methods, Results, and Discussion, with appropriate figures and/or tables. 2) Develop a protocol for an original epidemiological study about an ongoing debate or unresolved issue in infectious diseases. The final report should include a description of the scientific question or study motivation, study aims, design, exposures/outcomes (as applicable), counterfactual comparison (as applicable), and statistical analysis plan. Attention to realistic constraints on practical matters including resource requirements, human subjects and ethical considerations, and other issues must be evident.

Competency	Course	Describe specific assessment opportunity
IDV MPH C7. Discuss the role of local, state, federal, and international public health agencies in the prevention and control of infectious diseases.	<b>PB HLTH 264: Capstone Seminar in Infectious Diseases</b>	<b>Class Participation and Discussion:</b> Students are assessed for their attendance of the class and participation in discussion in class. During the class, the students review and discuss their summer placement projects in field study. Furthermore, they will participate in discussions with the instructor, invited speakers, and other students at class on various topics on public health infectious diseases. Guest speakers are invited to speak about their experiences, the different agencies they worked with, and the services they provided. The agencies include CDC, California Department of Public Health, Alameda County of Public Health, and Contra Costa County of Public Health. The services include many different aspects in the prevention and control of infectious diseases (e.g. epidemiology, environmental microbiology/infectious disease, and COVID research). During their field study presentation, the students have the opportunity to present their field study in different agencies and institutions and on different projects. The agencies and institutions include many state, county, and local public health agencies, academic institutions, and private industries/companies. The projects include many different areas in the prevention and control of infectious diseases. Based on their experiences in field study and through presentations and discussions at class, the students develop the topic of their analytical paper and capstone project, and will be assigned for a faculty mentor to complete the capstone project.

**Table D4.1.8 Assessments of Competencies for MPH in Maternal Child and Adolescent Health Concentration**

Competency	Course	Describe specific assessment opportunity
MCAH MPH C1. Discuss a problem facing MCAH populations with an evidence-based rationale for why it is a topic of importance.	<b>PB HLTH 210: Foundations of Maternal and Child Health Policy, Practice, and Science</b>	<b>Paper 1: Problem Statement:</b> This will be a paper identifying and describing the MCAH topic selected by the student. This paper should include a clear definition and description of the problem and/or issue with a rationale for why it is a topic of importance in the field.
MCAH MPH C2. Identify and evaluate the relative contribution of individual and environmental factors associated with maternal and child health.	<b>PB HLTH 210J: Maternal, Child, and Adolescent Health Journal Club</b>	<b>Presentation: Scientific Article Review:</b> This will be an oral presentation and discussion where students will critique a peer-reviewed journal article that reports quantitative data related to an MCAH issue. This presentation should include the identification and evaluation of the individual and contextual factors that influence the MCAH outcome.
MCAH MPH C3. Identify a maternal and child health issue and evaluate a policy solution.	<b>PB HLTH 210: Foundations of Maternal and Child Health Policy, Practice, and Science</b>	<b>Paper 2: Policy Brief:</b> The policy brief is an expansion of the issue students described in Paper 1 and in their TED talk. In this paper, students utilize the theories and concepts discussed in class and presented in the readings to present a policy proposal to address their specific issue.
MCAH MPH C4. Interpret results of epidemiologic studies of maternal and child health problems and synthesize published epidemiological literature in order to summarize current knowledge and develop and test strong research questions that will advance knowledge in the field of maternal and child health.	<b>PB HLTH 210E: Practicum in MCH Data Analysis I</b>	<b>Final Oral Presentation:</b> At the end of the semester, students will orally present their summarized progress that will include the following information: Specific research question, Literature review, Data sources, Participants (Figure 1: exclusion criteria and final N for dataset), Tables (Tables 2 & 3: Characteristics of the Study Population and Bivariate associations of Exposure and Outcome with Covariates, plus any other tables that you have filled out), Future data analysis plans for analyses to be conducted in spring semester.

Competency	Course	Describe specific assessment opportunity
	<b>PB HLTH 210F: Practicum in MCH Data Analysis II</b>	<b>Oral Presentation:</b> In a practice session at the end of the semester, students will orally present their summarized progress that will include the following information: Specific research question, Literature review, Data sources, Participants (Figure 1: exclusion criteria and final N for dataset), Tables (Tables 2 & 3: Characteristics of the Study Population and Bivariate associations of Exposure and Outcome with Covariates, plus any other tables that you have filled out), Future data analysis plans. This practice session will provide assessment and feedback in advance of the final ILE.
	<b>PB HLTH 210J: Maternal, Child, and Adolescent Health Journal Club</b>	<b>Presentation: Scientific Article Review:</b> This will be an oral presentation and discussion where students will critically review a selected peer-reviewed quantitative article in the field of maternal, child, adolescent and family health. Students will critique and engage in a critical discussion of the overall assessment of the study, evaluating its strengths and limitations, contribution to MCAH, and recommendations for future studies in MCAH.
MCAH MPH C5. Apply basic principles of quantitative research and epidemiology for understanding and addressing MCH problems.	<b>PB HLTH 210E: Practicum in MCH Data Analysis I</b>	<b>Final Figure and Tables; Final Oral Presentation:</b> Students will conduct a secondary data analysis in either R or Stata, write a publishable-quality research paper, and conduct a 15-minute conference-style presentation of their research.
	<b>PB HLTH 210F: Practicum in MCH Data Analysis II</b>	<b>Methods and Results Draft; Oral Presentation:</b> Students will conduct a secondary data analysis in either R or Stata, write a publishable-quality research paper, and conduct a 15-minute conference-style presentation of their research.
	<b>PB HLTH 210J: Maternal, Child, and Adolescent Health Journal Club</b>	<b>Presentation: Scientific Article Review:</b> This will be an oral presentation and discussion where students will critically review a selected peer-reviewed quantitative article in the field of maternal, child, adolescent and family health. The presentation will include the research study design, methods, data analysis techniques, results, and presentation and interpretation of study findings.



**Table D4.1.9 Assessments of Competencies for MPH in Public Health Nutrition Concentration**

Competency	Course	Describe specific assessment opportunity
PHN MPH C1. Describe the magnitude, distribution and trends of nutrition problems in populations.	<b>PB HLTH 206: Critical Issues in Public Health Nutrition</b> (2-year MPH, 11-Month MPH, 4+1 MPH)	<b>Short Paper:</b> Students prepare a five-page paper for a professional audience addressing a current specific problem in public health nutrition. Students must explain the background and significance, existing research and limitations, and analyze the problem, solutions, issues, and/or controversies of the situation.
	<b>PB HLTH W206A: Maternal and Child Health Nutrition</b> (Online MPH)	<b>Fact Sheet Project:</b> Students prepare a four-page fact sheet document for a professional audience addressing a current issue in the field of maternal and child nutrition. As part of this project, they must describe the etiology and epidemiology of the public health nutrition issue, summarize the existing research on the topic, and present the long-term implications of the issue on individuals and communities.
PHN MPH C2. Explain dietary influences including social determinants on health outcomes, and identify population-based strategies to improve nutritional health.	<b>PB HLTH 207A: Public Health Aspects of Maternal and Child Nutrition</b> (2-year MPH, 11-Month MPH, 4+1 MPH)	<b>SNAP Project Experience &amp; Write-up:</b> Students simulate a SNAP participant experience for at least three days and report on their experience in a five-page report. The report includes an analysis of a SNAP diet compared to a nutrient standard to assess adequacy of intake, and by extension its influence on health outcomes. Students examine the changes and effects the SNAP budget makes on the nutrient quality of their diet to examine the social determinants that influence diet. They analyze how dietary counseling and food policy around SNAP influences low-income populations.  <b>Fact Sheet Project:</b> Students identify a current health issue or problem, how it is defined and diagnosed, discusses the problem at a population level and the social determinants of food/diet choices related to the problem, discusses the research challenges and population based strategies to prevent or remedy the problem and improve nutritional health.
	<b>PB HLTH W206A: Maternal and Child Health Nutrition</b> (Online MPH)	<b>Fact Sheet Project:</b> Students prepare a four-page fact sheet document for a professional audience addressing a current issue in the field of maternal and child nutrition. As part of this project, they will identify and explain dietary influences that affect health and identify current strategies, challenges, and proposed solutions, to further improve health at the population level.
PHN MPH C3. Assess the nutritional status of	<b>PB HLTH 206C: Nutritional Epidemiology</b>	<b>Biomarkers of Nutrition Project:</b> Students evaluate a biomarker of nutritional status and create a fact sheet discussing the biomarker, its availability in diet, and its use



Competency	Course	Describe specific assessment opportunity
individuals using anthropometric, diet and biochemical methods.	<b>(2-year MPH, 11-Month MPH, 4+1 MPH)</b>	in evaluating nutritional status. Students perform an anthropometric measurement (e.g., height, weight, mid-upper arm circumference, waist/hip circumference) on a friend/family member and then discuss sources of error, challenges, issues, and effectiveness.
	<b>PB HLTH W206A: Nutrition Assessment (Online MPH)</b>	<b>Dietary Assessment:</b> Students complete a dietary assessment using the 24-hour recall method and ASA24 tool to assess the nutritional status of an individual. Students perform an anthropometric measurement (e.g. height, weight, mid-upper arm circumference, waist/hip circumference) on a friend/family member and then discuss sources of error, challenges, issues, and effectiveness.
PHN MPH C4. Evaluate nutrition research and interpret the implications for public health policies and programs, identifying key issues that address social inequities.	<b>PB HLTH 206B: Food and Nutrition Policies and Programs (2-year MPH Selective, 11-Month MPH, 4+1 MPH)</b>	<b>Policy Paper:</b> Students write a background analysis paper to promote a particular position on an agriculture, nutrition, or food policy issue. The paper summarizes the problem and recommends a particular policy solution, reviews the literature, describes the stakeholders and their positions, analyzes the framing and coverage of the issue in the media, and provides a clear rationale outlining why the solution is better than any other options. Students are expected to address the potential of the policy to reduce social inequities or the possibility of an unintended consequence of widening the inequity.
	<b>PB HLTH W206B: Food and Nutrition Policy (Online MPH)</b>	<b>Policy Paper:</b> Students write a background analysis paper to promote a particular position on an agriculture, nutrition, or food policy issue. The paper summarizes the problem and recommends a particular policy solution, reviews the literature, describes the stakeholders and their positions, analyzes the framing and coverage of the issue in the media, and provides a clear rationale outlining why the solution is better than any other options. Students are expected to address the potential of the policy to reduce social inequities or the possibility of an unintended consequence of widening the inequity.
	<b>PB HLTH 206D: Nutrition in Developing Countries (2-year MPH Selective)</b>	<b>Written Case Report and Oral Presentation of Case:</b> Students prepare both a written and an oral case analysis about a nutrition-related problem, its causes and current research, the context of the problem including the historical, socio-political, cultural, and economic context, current policies and interventions, and proposals for solutions to address the social inequities.

Competency	Course	Describe specific assessment opportunity
PHN MPH C5. Apply interdisciplinary approaches to integrate social, political, economic, and ecological dimensions to contextualize nutrition, food systems and health problems and opportunities.	<b>PB HLTH 206B: Food and Nutrition Policies and Programs (2-year MPH Selective, 11-Month MPH, 4+1 MPH)</b>	<b>Policy Paper:</b> Students write a background analysis paper to promote a particular position on an agriculture, nutrition, or food policy issue. The paper summarizes the problem and recommends a particular policy solution, reviews the literature, describes the stakeholders and their positions, analyzes the framing and coverage of the issue in the media, and provides a clear rationale outlining why the solution is better than any other options. Students are expected to apply interdisciplinary approaches to integrate social, political, economic, and ecological concerns within the policy analysis.
	<b>PB HLTH W206B: Food and Nutrition Policy (Online MPH)</b>	<b>Policy Paper:</b> Students write a background analysis paper to promote a particular position on an agriculture, nutrition, or food policy issue. The paper summarizes the problem and recommends a particular policy solution, reviews the literature, describes the stakeholders and their positions, analyzes the framing and coverage of the issue in the media, and provides a clear rationale outlining why the solution is better than any other options. Students are expected to apply interdisciplinary approaches to integrate social, political, economic, and ecological concerns within the policy analysis.
	<b>PB HLTH 206D: Nutrition in Developing Countries (2-year MPH Selective)</b>	<b>Written Case Report and Oral Presentation of Case:</b> Students prepare both a written and an oral case analysis about a nutrition-related problem, its causes, the context, including the relevant cultural, economic, political, and geographical considerations, analyze the stakeholders, current policies and interventions, and propose a solution to the problem. Students are expected to apply interdisciplinary approaches to integrate social, political, economic, and ecological dimensions to contextualize nutrition, food systems, and health problems and opportunities within the case analysis.

**Table D4.1.10 Assessments of Competencies for DrPH**

Competency	Course	Describe specific assessment opportunity
DrPH C1: Ethics & principles: Identify and apply ethical principles of social justice and human rights in public health research and practice.	<b>PB HLTH 293A: DrPH Seminar</b>	<b>Analysis on Case Study:</b> Students will review a scholarly article about the limits of ethical principles/guidelines and why a human rights framework is necessary for ethical public health research and practice. International human rights mechanisms and Human Rights Impact Assessments (HRIA) will be described and discussed. Individual assessment (homework due Week 12): Students apply steps of the HRIA to write a one- to two-page analysis of a proposed public health practice/policy case study.
DrPH C2: Social justice orientation: Demonstrate an understanding of the multiple mechanisms by which social, political, economic and historical factors contribute to health inequities.	<b>PB HLTH 293B: DrPH Seminar</b>	<b>Theory Concept Map and Presentation:</b> Using Maxwell's guidance about "concept mapping" and the Week 3 lecture, students will draft a concept map based on one of the five article options that employ a social justice orientation (e.g., ecosocial theory, intersectionality, biological embedding) provided in Week 4. As part of the presentation component of the session, students will be asked to share their concept map illustrating how the theoretical framework was used or can be applied (i.e., its relevance to the research question and research design, how did or could the framework/theory shape the research process, how does the framework employ a social justice orientation to demonstrate the relationship between multiple mechanisms by which social, political, economic and historical factors contribute to health inequities). Students are also asked to consider if there are articles or studies among the choices that use an explicit theory or conceptual framework that they might be drawing from or may serve as a template for their research. This assignment prepares students for the Week 5 assignment for which they will submit a conceptual model for their proposed research.

Competency	Course	Describe specific assessment opportunity
DrPH C3: Community focus: Integrate community centered focus in the assessment, development, and dissemination of public health research, policy and practice.	<b>PB HLTH 293B: DrPH Seminar</b>	<b>Proposal Presentation:</b> Students will present their research in oral format using slides starting in Week 14. This presentation is a practice space for the qualifying exam/orals presentation. The presentation includes the key aspects of a student's proposed research including: their personal connection to the topic, research question(s) and specific aims, conceptual framework, significance and background, methodological approach, and any strengths and limitations. Drawing on our learning from Weeks 9-13, whether or not students plan to use a participatory approach to their research, they will include as part of their presentation how they would integrate a community-centered focus for at least one of their research questions/aims. Students will be asked to consider 1) community partners they would partner with, 2) how they would integrate inclusive practice and cultural humility, 3) any community organizing and/or CBPR principles that would guide their work, and 4) two ethical challenges they anticipate and how they might address them. Presentations are 15 minutes in length with an additional seven-10 minutes of Q&A for each presentation.
DrPH C4: Transdisciplinary training: Formulate, analyze, and advocate for multi-sector solutions to improve population health across interdisciplinary settings.	<b>PB HLTH 293D: DrPH Seminar</b>	<b>Prospectus Draft:</b> Session 10: Students will turn in a full draft of their prospectus, including the significance and innovation of their proposed project that integrates a multidisciplinary orientation to the public health issue. Students include a well-defined problem statement, what is already known about the problem, what we do not know about the problem, and how their study will make a unique contribution to the field. Students will state concisely the goals of the proposed research and summarize the expected hypotheses and outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved, and the translation to policy and advocacy efforts to address the public health issue/problem. Students must include an explanation of how the proposed project will improve scientific knowledge, technical capability, and/or practice across two or more broad fields. They will describe how the concepts, methods, technologies, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

Competency	Course	Describe specific assessment opportunity
DrPH C5: Applied practice-based research: Translate rigorous research and evidence-based best practices to transform public health systems to meet the needs of local or global communities.	<b>PB HLTH 293E: DrPH Seminar</b>  <b>and</b>  <b>PB HLTH 293F: DrPH Seminar</b>	<b>Workshop:</b> Students will be expected to prepare and conduct at least one 30-minute workshop about their current dissertation work to the seminar. This workshop will be scheduled at the beginning of the semester, prioritizing timing for those who would like to use the workshop to specifically prepare for an upcoming presentation (e.g., mock QE; conference presentation). The workshop should consist of 1) overview summary on dissertation progress and identification of specific areas for peer input and feedback; and 2) a statement of impact that demonstrates how their addition to the current body of knowledge, coupled with the existing research and evidence in this field, will impact communities of interest. Students should plan their workshop to address and get feedback on a specific question(s) of relevance and timeliness for their current progress.
DrPH C6: Practice-based leadership: Identify personal leadership strengths and opportunities for growth in practice-based settings, through awareness of self, ability to work with and through others, and ability to identify and work through organizational dynamics.	<b>PB HLTH 290: Foundations of Public Health Leadership and Practice</b>	<b>Individual Development Plan:</b> Session 5 will include students' self assessment of leadership skills and mapping time in the program. Discussion of two student case examples (focus topic: Embracing your strengths and weaknesses, and recognizing growth areas including cultural proficiency). Students will complete the Individual Development Plan (IDP) and receive detailed feedback on the plan. The IDP includes reflection on students' experiences and learnings to to date, including a) Examining your values; b) Assessing your leadership competencies; c) Developing your mission statement; d) Creating a networking plan; and e) Identifying concrete development goals and an action plan to achieve those goals, including use of the immunities to change framework for at least one goal.

- (2) For degrees that allow students to tailor concentration coursework and/or competencies at an individual level in consultation with an advisor, the school or program must present evidence, including policies and sample documents, that demonstrate that each student and advisor create a matrix in the format of Template D4-1 for the plan of study. Include a description of policies in the self-study document and at least five sample matrices in the electronic resource file.**

Interdisciplinary MPH (11-month residential)

The residential Interdisciplinary MPH is an individualized concentration with individually defined learning goals. In addition to the required coursework, the adviser and student, together, are responsible for identifying elective courses to create appropriate curricular depth/expansion on foundational knowledge and skills according to the student's individual learning goals, and for defining a set of at least five competencies articulating the unique set of knowledge and skills that justifies awarding the Interdisciplinary MPH degree and differentiates the degree from other concentrations.

In addition to the five concentration competencies specific to the Interdisciplinary MPH listed below, students are encouraged to select concentration competencies from other tracks, as they apply to the elective course work students select.

1. Demonstrate methodological expertise for public health research in choosing appropriate study designs, in calculating and interpreting measures of health risks, disease, and their associations.
2. Apply interdisciplinary approaches to integrate social, political, economic, and ecological dimensions to contextualize public health problems and opportunities.
3. Identify ethical challenges and principles for guiding public health planning, implementation and evaluation.
4. Practice writing skills needed for authoring a peer-reviewed scientific publication.
5. Evaluate public health research, summarize current knowledge, interpret the implications for public health policies and programs, and make recommendations for improvement.

A copy of the residential Interdisciplinary MPH advising form that will be implemented during AY 2022-2023 is available in ERF D4.2.

Interdisciplinary MPH (online)

Interdisciplinary students create a customized course map that allows our students to select from course options mapped to concentration competencies and the option of a data visualization competency ("Identify methods to develop data visualizations to communicate findings to key stakeholders") unique to our program to meet at least five concentration competencies. Further, the course mapping process is designed to maintain flexibility for students in planning when they take specific courses in their second year in order to tailor a course map that is aligned with the professional goals of a student community who aims to apply their learning in real time. Documents are available in ERF D4.2.

- (3) Include the most recent syllabus for each course listed in Template D4-1, or written guidelines for any required elements listed in Template D4-1 that do not have a syllabus. If the syllabus does not contain a specific, detailed set of instructions for the assessment activity listed in Template D4-1, provide additional documentation of the assessment, e.g., sample quiz question, full instructions for project, prompt for written discussion post, etc.**

Documents are available in ERF D4.3.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Concentration competencies clearly articulate the unique set of knowledge and skills to be acquired by MPH and DrPH students. As part of the self-study process, faculty in all divisions were actively engaged in evaluating and revising competencies and ensuring sufficient coverage and assessment of competencies through coursework, the integrated learning experience, and the applied practice experience. A [competencies webpage](#) is available for current and prospective students, and faculty and program staff who are advising students.

Plans for Improvement: Courses in the School of Public Health use a syllabus template approved by the Education Policy and Curriculum Committee (EPCC). As competencies are updated, faculty should ensure that foundational and concentration competencies addressed in the course are documented within the syllabus. Teaching Town Halls for faculty on the topics of best practices for consistent and equitable assessments (March 2023) and assessing individual students in group/team projects (April 2023) will disseminate and reinforce best practices for assessing group work.



---

## D5. MPH Applied Practice Experience

---

**MPH students demonstrate competency attainment through applied practice experiences.**

The applied practice experiences allow each student to demonstrate attainment of at least five competencies, of which at least three must be foundational competencies (as defined in Criterion D2). The competencies need not be identical from student to student, but the applied experiences must be structured to ensure that all students complete experiences addressing at least five competencies, as specified above. The applied experiences may also address additional foundational or concentration-specific competencies, if appropriate.

The school assesses each student's competency attainment in practical and applied settings through a portfolio approach, which reviews practical, applied work products that were produced for the site's use and benefit. Review of the student's performance in the APE must be based on at least two practical, non-academic work products AND on validating that the work products demonstrate the student's attainment of the designated competencies.

Examples of suitable work products include project plans, grant proposals, training manuals or lesson plans, surveys, memos, videos, podcasts, presentations, spreadsheets, websites, photos (with accompanying explanatory text), or other digital artifacts of learning. Reflection papers, contact hour logs, scholarly papers prepared to allow faculty to assess the experience, poster presentations, and other documents required for academic purposes may not be counted toward the minimum of two work products.

**(1) Briefly describe how the school or program identifies competencies attained in applied practice experiences for each MPH student, including a description of any relevant policies.**

Public health practice is an integral part of the Master of Public Health (MPH) degree at the University of California, Berkeley School of Public Health. To fulfill the applied practice experience, the school requires an approved, supervised "practicum" for all MPH students outside of its 11-month programs: the two-year MPH programs, 4+1 MPH programs, MPH concurrent degree programs, and Online Professional MPH programs, in all areas of concentration. For students in the 11-month MPH programs, we are currently working on enhancing applied practice experiences (APEX) to meet their unique needs, with new APEX requirements and expectations for the incoming 2023 cohorts.

Broadly, applied practice experiences may involve governmental, non-governmental, non-profit, industrial, and for-profit settings or appropriate university-affiliated settings. To be appropriate for applied practice experience activities, university-affiliated settings must be primarily focused on community engagement, typically with external partners. University health promotion or wellness centers may also be appropriate. The RISE: UC Berkeley School of Public Health Careers & Leadership Office (RISE) provides the academic and administrative structure for the practice component of the MPH program and provides support to students and organizations for a successful and mutually beneficial practicum experience.

The practicum provides the opportunity to integrate classroom learning and practice in a public health work environment. It is also an important opportunity for professional and career development. Students make important contributions to the host organization and the communities it serves while helping solve pressing public health concerns. Moreover, the practicum experience has the potential to further strengthen leadership skills that will help inform students' development as public health professionals. For students with extensive experience or advanced degrees in other fields, there is the opportunity to apply existing skills at a higher level and to expand professional skills in public health. Often students obtain mentors, a professional network, and employment upon graduation as a result of their practicum experiences.



## Practicum Support

As the central hub for comprehensive practicum support for both students and preceptors, the RISE Office includes career services and also coordinates a team of field consultants who work individually with students in designated MPH programs. While the career services team offers appointments and hosts events/trainings across all MPH programs, field consultants provide additional individual and program-specific support. Field consultants also review and approve all practicum documentation requirements, including ensuring at least five competencies are attained in at least two work products.

Individual advising, events/trainings, and resources are informed by student responses to the Pre-Practicum Self Assessment (PPSA). Resources for students include, but are not limited to: listings of funding and practicum opportunities, infographics that highlight prior practicum experiences, recordings of prior workshops, and planning worksheets. The RISE Office also provides resources for preceptors, including written guidelines, expectations, and best practices, as well as a webinar hosted annually each May.

## Academic Requirements

The applied practice experience requirement for students in the two-year MPH programs, concurrent degree MPH programs, and 4+1 MPH programs (i.e., summer practicum) involves a minimum of 400 hours (e.g., 10 weeks, 40 hours per week) and takes place between the end of their first and start of their second year of enrollment. Students in our Online Professional MPH (OOMPH) program must complete at least 130 hours for their practicum, typically completed part-time over multiple months after their first semester in the program (i.e., anytime practicum). In order to receive academic credit, each MPH student must successfully complete and submit the requirements listed below on our online platform, PHLEX. Students are responsible for managing deadlines and submitting the requirements (detailed below), after which preceptors review and approve (or request changes), followed by final review and approval by school field consultants.

- *Practicum Confirmation Form*: Submitted in advance of the practicum start date, this form details the organization, preceptor, timeline, compensation, and likely objectives and activities for the practicum.
- *Practicum Learning Agreement*: This document serves to align the learning goals and expectations between the student and the organization. Specifically, it identifies the competencies to be developed (at least five), the planned activities and timelines associated with these competencies, and two work products to be completed by the end of the experience. The agreement is initially drafted by the student, with input from their preceptor, and is reviewed by the student's field consultant at multiple points during the experience: at initial submission (beginning of the experience), in a midpoint check-in meeting, and at the culmination of the experience, to monitor progress and assess competency attainment.
- *Final Deliverables*: At the end of the practicum, students submit two written products that demonstrate how they have met the learning objectives of the practicum, including demonstration of relevant competencies that were identified in their learning agreement.
- *Evaluations*: At the end of the practicum students complete an online evaluation and preceptors are also invited to share their feedback. Surveys solicit feedback about the impact of the practicum on learning outcomes, including effects on public health competencies and project expectations, and areas for further improvement (e.g., for the individual student, host organization/preceptor, RISE team). Preceptors are also encouraged to discuss their own and the students' evaluation responses prior to the conclusion of the practicum as a way to identify lessons learned and contribute to ideas for meaningful change efforts.

MPH students completing a summer practicum also participate in a midpoint review/check-in. Attendees typically include the student, preceptor, field consultant, and other key staff who are most familiar with the student's organizational contributions. This review/check in typically takes place in late June through July in order to discuss progress to date, to identify ways to further enhance the practicum experience (including for future students and key organizational staff), and to explore ways to address challenges/resources needs that may have emerged.

Each student is expected to initiate, schedule, and facilitate the midpoint review/ check in in conjunction with their field consultant. This review is optional for Online MPH students.

Successful and timely completion of the practicum requirements are confirmed by the field consultants for each MPH program. MPH students who complete all summer practicum requirements will receive a "satisfactory" grade for three academic units (PH 297; *Field Study in Public Health*). Similarly, Online MPH students who satisfactorily complete the practicum requirements will have the practicum milestone checked in their Academic Progress Report for the Berkeley Graduate Division to review as part of their advancement to candidacy.

Details on processes to recruit MPH practicum students are available in ERF D5.1.

### **Impact of COVID-19**

With the ongoing challenges related to COVID-19, distance-based work continues and may be associated with uncertainties completing certain projects or activities. We support organizational/project efforts that exercise maximum flexibility and apply creative solutions in order to achieve practice experiences that are mutually beneficial and rewarding to the project team and the graduate student. Examples that have been extended by preceptors include adjusting timelines for the completion of certain deliverables, adopting modified expectations for the scope of work, and setting scheduled video chats (e.g., 15-30 minute social breaks) between the graduate student and team members to encourage community building.

### **Practice Requirements for 11-Month MPH Programs**

We are currently working on enhancing applied practice experiences (APEX) for students enrolled in 11-month MPH programs that will align with their professional development interests and goals, as well as streamline processes for the assessment and documentation of public health competencies, projects/organizations, and outcomes. While we aim to implement new APEX requirements and expectations for the incoming 2023 11-month MPH cohorts, we are currently engaged in gathering input from key stakeholders who will be directly involved in communicating, building systems to support implementation of, and overseeing these practice requirements (e.g., RISE Office and 11-month MPH faculty and program managers). We will leverage lessons learned to date from overseeing and supporting the practice requirements for our two- and three-year MPH programs, such as modifying documentation and related resources (e.g., learning agreement, student handbooks, and professional development workshops/trainings).

The possible menu of APEX options for 11-month MPH students will expand beyond the traditional practicum experience between a student and a host organization/preceptor and include course-based and service learning activities. These activities must be developed for or in collaboration with a practice setting and culminate in the development of deliverables such as an evaluation plan/report for a community agency and data analyses/visualization for a healthcare organization. As part of our information-gathering efforts during Fall 2022 and early Spring 2023, we plan on examining the existing list of practice-based courses that we offer, the types of deliverables that are produced in those courses and assessment criteria (e.g., individually, small groups), and other curricular opportunities across campus that may help to address public health competencies. We will also adapt our PHLEX platform to track student progress/requirements and to conduct APEX-related outreach.

**(2) Provide documentation, including syllabi and handbooks, of the official requirements through which students complete the applied practice experience.**

Link to Student Handbook:

- [2022-2023 Student Handbook](#) (Academic Degree Planning >> MPH Student Requirements >> Public Health Practicum Requirement)

Additional documents are available in ERF D5.2:

- For Students
  - Pre-Practicum Self-Assessment
  - Confirmation Form Planning Worksheet
  - Learning Agreement Planning Worksheet
  - Student Evaluation Questions
- For Preceptors
  - Preceptor Guidelines
  - PHLEX Companion Guide
  - Preceptor Evaluation Questions

**(3) Provide samples of practice-related materials for individual students from each concentration or generalist degree. The samples must also include materials from students completing combined degree programs, if applicable. The school or program must provide samples of complete sets of materials (i.e., Template D5-1 and the work products that demonstrate at least five competencies) from at least five students in the last three years for each concentration or generalist degree. If the school or program has not produced five students for which complete samples are available, note this and provide all available samples.**

Samples are available in ERF D5.3.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Over the last several years, we continue to provide high-touch, tailored support to our MPH students. In addition, several notable improvements have been made to enhance the quality of the student practice experience, to strengthen partnerships with public health professionals/preceptors, as well as to improve the practicum resources available to students as they explore opportunities, namely:

**Streamlining and improving our practicum portal system.** Our free online platform, PHLEX: Public Health Leadership & Experience Exchange, houses postings from partner organizations, alumni, and public health professionals from diverse sectors and geographic locations. Introduced in 2020, PHLEX is updated on a regular basis to offer up-to-date information about the types of positions that are available, anonymous student feedback about prior experience(s) with an organization, and individual contact information from community partners/preceptors who are open to direct outreach from students. This platform is also valuable in housing required practicum-related documentation and leverages a systematic, timely review and approval process for preceptors and field consultants to track student progress.

**Enhancing operational efficiencies and expanding partnerships.** The RISE Office coordinates regular meetings (ranging from weekly to monthly) between the RISE staff and field consultants to discuss student progress, practicum outreach, and events and resources to prepare students for public health practice. We have also established stronger relationships within our school and across campus (e.g., Center for Global Public Health) to enhance practicum preparation for students with specific areas of interest, to expand support for affiliation agreements where warranted, as well as externally (e.g., individual donors, foundations, training centers) who are interested in supporting our students' training in the public health field.

**Responding to student and organizational needs.** We no longer allow exemptions to waive the practice requirement for our MPH students. In previous years, we have allowed students to present evidence of previous qualifying public health work experience. However, since 2017, we have not allowed waivers because of challenges associated with assessing the application of public health competencies on prior work deliverables and missed opportunities to contribute to students' professional development and organizations' capacities to address public health priorities and change efforts.

Another significant change is that we no longer engage in a practicum matching process between students and organizations. Feedback from organizations highlighted the operational challenges with this resource-intensive process and students noted significant burdens meeting both application and decision-making deadlines. By shifting to a non-matching process, students' experiences of applying for practicum positions and contemplating offers mirrors the job search experience. Professional insights stemming from this more comprehensive student-driven process has enhanced students' application of personal leadership skills and foster greater alignment with their career goals.

With the onset of the COVID-19 pandemic requiring close examinations of our processes for student and organization/preceptor support, we also expanded the portfolio of opportunities for our students to deepen their public health competencies and helped rally resources to address the significant challenges that were being experienced (e.g., advocating for flexibility in timelines, providing compensation to address students' basic needs). Moreover, we have adjusted the minimum total hours in the field for summer practicum opportunities from 480 hours (12 weeks of full-time work ) to 400 hours (10 weeks of full-time work). This adjustment in the duration of the summer practicum was informed by both student and preceptor feedback and was implemented in Summer 2022. We will continue to collect and assess that feedback in order for the individual and organizational benefits and challenges to inform future shifts in the practicum guidelines.

**Weaknesses:** We do not identify significant weaknesses related to this criterion. While the growth in our MPH student population and host organization's limited/lack of funding and onboarding have created challenges, our RISE Office staff have time and again stepped up to meet the challenges and assure that the students thrive in their applied practice experience.

**Plan for Improvement:** We will use similar systems and requirements to assure consistency in tracking APEX progress across all programs. Currently, not all students submit their practicum/APEX materials through the PHLEX portal. Instead, the faculty who work directly with DrPH and MPH/MBA students on their APEX requirements track and review all related submissions through separate mechanisms and processes. Moving forward, we would like to explore with faculty the benefits and timelines for transitioning all practice-related requirements into the same portal in order to streamline the competency mapping and requirement submission process, including for 11-month students. By bolstering data collection processes, we will also strengthen our evaluation of students' strengths and areas for professional and leadership development that are beneficial in informing specific program and school-wide public health training goals.

---

## D6. DrPH Applied Practice Experience

---

The work product may be a single project or a set of related projects that demonstrate a depth of competence. The DrPH residency is completed as a discrete experience (such as a practicum or internship) or integrated into school coursework. In either case, the deliverable must contain a reflective component that includes the student's expression of personal and/or professional reactions to the applied practice experience. This may take the form of a journal or other written product, a professional portfolio, or another deliverable as appropriate for the school.

The school identifies a minimum of five foundational and/or concentration-specific competencies (as defined in Criteria D3 and D4) that are reinforced and/or assessed through application. The school may either choose at least one competency from the leadership, management, and governance domain in Criterion D3 or choose a concentration-specific competency identified in Criterion D4 if it relates to leadership skills. Competencies may differ from student to student.

- (1) Briefly describe how the school or program identifies competencies attained in applied practice experiences for each DrPH student, including a description of any relevant policies.

Residency Agreement: In the development of the residency agreement, students identify their learning objectives and interests and integrate that with the needs and opportunities of their selected residency site (organization), and develop a work plan to align those learning objectives with associated competencies, proposed activities, evidence of learning/products, and timeline. The learning objectives are key to tying the student's academic learning with the practice, skills and knowledge they gain during their residencies. DrPH students are required to establish six learning objectives for their residencies. The learning objectives are intended to focus the student's activities to assure that personal and organizational interests are met. Three specific areas have been identified for the six required learning objectives, which includes a leadership competency: 1) context (systems and contexts; organizational), 2) capabilities (technical skills and competencies; leadership skills and abilities; core and specialty knowledge), and 3) career (general skills and knowledge). Students then tie each of their particular objectives to the CEPH competencies for DrPH, for a total of at least six foundational and/or concentration-specific competencies, including at least one leadership competency. DrPH residency guidelines are available in ERF D6.3.

The residency agreement is developed over time leading up to and through the residency placement. It is drafted prior to the start of the student's placement, then revisited two weeks into the placement; it serves as an anchoring focus during the residency site visit at the midpoint of the placement; and competency attainment is assessed against the residency agreement at the end of the placement. Each of these steps is led by the student in consultation with the residency supervisor and the preceptor.

Final Deliverables: At the end of the residency placement, students submit copies of the final deliverables identified in their residency agreement, to demonstrate achievement of their residency learning objectives and the competencies they identified for their growth during the residency placement.

Final Reflection: Following the completion of the residency, students meet with the residency supervisor to review the work/research products of the residency and debrief on the residency experience, as an opportunity to reflect on growth on individual learning objectives, achievement of competencies, and opportunities for future growth.

**(2) Explain, with references to specific deliverables or other requirements, the manner through which the school or program ensures that the applied practice experience requires students to demonstrate leadership competencies.**

In the course of developing their residency agreement, students develop learning objectives for their residency, including at least one learning objective related to leadership development. They then identify a CEPH competency that they will focus on related to this leadership development learning objective. While the student drives the development of the draft learning objectives, they are refined in collaboration with the residency supervisor and preceptor. The leadership learning objective in particular must highlight capabilities in this area, including the art of integrating public health knowledge, theory, and practice and the ability to have an impact on the environment as a public health leader. This includes critical thinking, problem-solving, interdisciplinary teamwork, cultural competence, decision-making, communication, and leadership.

**(3) Provide documentation, including syllabi and handbooks, of the official requirements through which students complete the applied practice experience.**

Documentation is available in ERF D6.3.

**(4) Provide samples of practice-related materials for individual students from each concentration or generalist degree. The school or program must provide samples of complete sets of materials (i.e., Template D6-1 and the work products/documents that demonstrate at least five competencies) from at least five students in the last three years for each concentration or generalist degree. If the school or program has not produced five students for which complete samples are available, note this and provide all available samples.**

Samples are available in ERF D6.4.

**(5) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

As currently designed, the DrPH Applied Practice Experience has several strengths of note:

- **Customized to student interests and experiences:** A requirement of the DrPH program is that students must have at least two years post-masters work experience. As such, our students join the program with a range of experiences, skills, growth opportunities, and interests. The residency process and experience is designed for maximum flexibility to adjust to each student's interests and needs.
- **Advances the student meaningfully based on mutually agreed upon objectives:** In the process of developing their residency plans with an organization, students must articulate their six learning objectives. In the future, we will have students tie these explicitly to CEPH competencies as well, to further their thinking and their learning. The process of developing these objectives in conversation with the organization creates a foundation for a summer experience that is mutually beneficial: the student will work on a project or deliverable of importance to the organization, and the organization will prioritize the student's learning and growth around their six (or more) objectives that they helped define.
- **Emphasizes leadership development in particular:** The residency provides a unique opportunity for the student to practice and grow their leadership skills. The residency

development process includes learning objectives before the placement, during the placement, and after the placement that are strongly focused on leadership development. The explicit focus on leadership as part of the identification of a residency site, the execution of the work, and the process of transitioning out, are critical for the student's future success within the program and later in their career.

The DrPH Applied Practice Experience also has an opportunity for improvement around the reflective deliverable and learnings at the completion of the placement. In particular, at this point, the completion of the residency placement focused significantly on completion of the deliverables outlined in the residency agreement. Reflection and learning from the placement has occurred via informal one-on-one debriefs with the residency supervisor. We recognize an opportunity to formalize and strengthen this process by:

- Requiring a reflective deliverable for all students at the completion of the residency, focused on the following:
  - What the student learned from the experience in terms of content and as a leader
  - What the student identified as their strengths during the placement
  - What the student identified as their growth opportunities during the placement
  - Future goals for growth and a plan for when and how they will achieve those goals
- Formalizing the debrief with the residency supervisor to review this reflective deliverable

The residency placement can also be further strengthened by addressing the following weaknesses:

- **Individual customization can lead to a feeling of fragmentation between students:** With the strong focus on customization, student experiences around the three phases of the residency (pre-residency, during, and post-residency) can vary greatly and students can feel isolated from their colleagues. The program will address this by creating more group-level touchpoints throughout the residency process. In addition, during those touchpoints, learning and application of each other's experiences will be translated to multiple settings so all students can learn together, despite widely varying interest areas.
- **Many students choose their current place of work for their residency, leading to a possible loss of alternate options that may be a better learning experience:** Many students work during the program, and as such, seek to carve a residency out of their current work arrangements. The process as it currently stands creates an expectation that while the student may choose to work in their current organization, it needs to be in a role that is new and/or stretches them with new skills or responsibilities in some way. However, sometimes this can still be limiting compared to what the student might consider if they were not tied to their current organization. The program will address this by requiring students to identify at least two options at two different organizations so they can make a better informed decision and stretch their learning in new ways.

## D7. MPH Integrative Learning Experience

MPH students complete an integrative learning experience (ILE) that demonstrates synthesis of foundational and concentration competencies. Students in consultation with faculty select foundational and concentration-specific competencies appropriate to the student's educational and professional goals; demonstrating synthesis and integration requires more than one foundational and one concentration competency.

Professional certification exams (e.g., CPH, CHES/MCHES, REHS, RHIA) may serve as an element of the ILE, but are not in and of themselves sufficient to satisfy this criterion.

The school identifies assessment methods that ensure that at least one faculty member reviews each student's performance in the ILE and ensures that the experience addresses the selected foundational and concentration-specific competencies. Faculty assessment may be supplemented with assessments from other qualified individuals (e.g., preceptors).

- (1) List, in the format of Template D7-1, the integrative learning experience for each MPH concentration, generalist degree, or combined degree option that includes the MPH. The template also requires the school or program to explain, for each experience, how it ensures that the experience demonstrates synthesis of competencies.

All MPH students complete an Integrative Learning Experience that synthesizes foundational and concentration competencies. The format of the Integrative Learning Experience and the process by which competencies are identified varies by concentration. Tables D7.1.1 through D7.1.9 summarize the ILE for each residential MPH degree, and Table D7.1.10 summarizes the ILE for the Online MPH program (OOMPH).

**Table D7.1.1 MPH Integrative Learning Experience for Environmental Health Sciences**

Integrative learning experience	How competencies are synthesized
Thesis	<ul style="list-style-type: none"> <li>- Students enroll in either: 1) PB HLTH 292 MPH Seminar (fall, 3 units) and PB HLTH 292 MPH Seminar (spring, 2 units); or 2) PB HLTH 299 in fall and spring (variable units, but generally 3 units each in the fall and spring).</li> <li>- Students are required to submit a Master's thesis on a topic within the field of environmental health sciences. The topic of the thesis project is determined by the student in consultation with the instructional faculty (PH292) or their faculty advisor (PH299).</li> <li>- Students are expected to select and demonstrate one foundational public health competency and one competency related to their concentration of study (EHS-MPH).*</li> </ul> <p>* For students initiating their thesis in academic year 2023-2024 or later, students will be expected to select and demonstrate at least one foundational public health competency and at least one competency related to their concentration of study (EHS-MPH).</p>



**Table D7.1.2 MPH Integrative Learning Experience for Epidemiology and Epidemiology/Biostatistics**

Integrative learning experience	How competencies are synthesized
Master's Paper	<ul style="list-style-type: none"> <li>- Students enroll in PB HLTH 292: MPH Seminar (fall and spring, year 2)</li> <li>- Students are required to submit a master's paper on a topic within the field of epidemiology. The topic of the capstone project is determined by the student in consultation with their faculty advisor.</li> <li>- Competencies are preselected by the program.</li> </ul>
<p>MPH Foundational Competency:</p> <p>C4. Interpret results of data analysis for public health research, policy, or practice</p> <p>Epidemiology MPH Concentration Competencies:</p> <p>C1. Demonstrate methodological expertise for epidemiological research in choosing appropriate study designs, in calculating and interpreting measures of disease and association, in identifying and addressing sources of bias in studies, in estimating and interpreting confounding and effect measure modification, and in applying causal frameworks to the assessment of causality in associations.</p> <p>C2. Implement methods of data management and cleaning for epidemiologic data sets, including using SAS and/or R.</p> <p>C4. Interpret study findings including critically identifying strengths and limitations of individual studies.</p>	

**Table D7.1.3 MPH Integrative Learning Experience for Global Health and Environment**

Integrative learning experience	How competencies are synthesized
Thesis	<ul style="list-style-type: none"> <li>- Students enroll in either: 1) PB HLTH 292 MPH Seminar (fall, 3 units) and PB HLTH 292 MPH Seminar (spring, 2 units); or 2) PB HLTH 299 in fall and spring (variable units, but generally 3 units each in the fall and spring).</li> <li>- Students are required to submit a Master's thesis on a topic within the field of environmental health sciences. The topic of the thesis project is determined by the student in consultation with the instructional faculty (PH292) or their faculty advisor (PH299).</li> <li>- Students are expected to select and demonstrate one foundational public health competency and one competency related to their concentration of study (GHE-MPH).*</li> </ul> <p>* For students initiating their thesis in academic year 2023-2024 or later, students will be expected to select and demonstrate at least one foundational public health competency and at least one competency related to their concentration of study (GHE-MPH).</p>

**Table D7.1.4 MPH Integrative Learning Experience for Health and Social Behavior**

Integrative learning experience	How competencies are synthesized
Option A: Public Health Analysis	<ul style="list-style-type: none"> <li>- Students enroll in coursework from an approved list of courses along with one-unit PB HLTH 299: Independent Study taken with the instructor of that course.</li> <li>- With the approval of the professor, students chose a capstone project that they developed within the parameters of the selected course. The project can take the form of a literature review, research proposal, intervention proposal, policy analysis or similar document.</li> <li>- Students are expected to meet regularly with faculty who provide mentorship and guidance for the research project.</li> <li>- Competencies are preselected by the program.</li> </ul>
Option B: Quantitative Research Project	<ul style="list-style-type: none"> <li>- Students enroll in coursework from an approved list of courses along with one-unit PB HLTH 299: Independent Study taken with the instructor of that course.</li> <li>- The student's capstone product is a quantitative research analysis based on one of the quantitative project courses approved for this option and a written component.</li> <li>- Students are expected to meet regularly with faculty who provide mentorship and guidance for the research project.</li> <li>- Competencies are preselected by the program.</li> </ul>
Option C: Master's Thesis	<ul style="list-style-type: none"> <li>- Students enroll in coursework from an approved list of courses along with one-unit PB HLTH 299: Independent Study taken with the instructor of that course.</li> <li>- The student's capstone product is a master's thesis submitted directly to the Graduate Division. Students must also have a written commitment from a faculty advisor and have identified their faculty thesis committee. In addition the student will need to complete the appropriate online Collaborative IRB Training Initiative (CITI) course and submit an Application for Candidacy for the Master's Degree Plan Thesis to the Graduate Division by the end of the semester prior to the semester they plan to graduate.</li> <li>- The student and faculty advisor agree upon an enhanced final project that meets requirements for a capstone project: Reflects mastery of relevant competencies in HSB and public health, e.g., familiarity with concepts and theories in public health on origins of diseases (e.g., social determinants of health; health equity and social justice), social epidemiology and statistical considerations, intervention approaches, evaluation, community based participatory research, etc.</li> <li>- Students are expected to meet regularly with faculty who provide mentorship and guidance for the research project.</li> <li>- Competencies are preselected by the program.</li> </ul>

Integrative learning experience	How competencies are synthesized
<p>MPH Foundational Competency:</p> <p>C4. Interpret results of data analysis for public health research, policy or practice</p> <p>HSB MPH Concentration Competencies:</p> <p>C5. Apply critical social analysis to issues of race and ethnicity, gender and sexuality, economic status, colonialism and other important axes of difference and power as they impact health and public health practice.</p> <p>C6. Apply key social scientific approaches to understanding racism and developing anti-racist and intersectional approaches to public health.</p>	

**Table D7.1.5 MPH Integrative Learning Experience for Health Policy and Management**

Integrative learning experience	How competencies are synthesized
Capstone Project (MPH, MPH/MBA)	<ul style="list-style-type: none"> <li>- Students enroll in PB HLTH 223E: Capstone Seminar in Health Policy and Management.</li> <li>- The student, working with course instructor and two faculty readers, formulates a capstone project that will allow them to further explore an area of interest in depth and involve synthesizing at least three competency areas from their previous coursework. At least one of these competencies will come from the MPH foundational competency list and at least one of the competencies will come from the HPM concentration competency list.</li> </ul>
Advanced Policy Analysis (MPH/MPP)	<ul style="list-style-type: none"> <li>- Students enroll in PP 205: Advanced Policy Analysis Seminar.</li> <li>- The student, working with course instructor and two faculty readers, formulates an advanced policy analysis that will allow them to further explore an area of interest in depth and involve synthesizing at least three competency areas from their previous coursework. At least one of these competencies will come from the MPH foundational competency list and at least one of the competencies will come from the HPM concentration competency list.</li> </ul>

**Table D7.1.6 MPH Integrative Learning Experience for Infectious Diseases and Vaccinology**

Integrative learning experience	How competencies are synthesized
Comprehensive Paper	<ul style="list-style-type: none"> <li>- Students enroll in PB HLTH 264: Current Issues in Infectious Diseases (fall in the third semester). Students also register in the faculty capstone paper mentor's PB HLTH 299: Independent Study in the spring of their graduating semester to receive mentorship on capstone paper.</li> <li>- Students are expected to identify their paper topic early in the fall semester. The topic may build upon the student's own experience, e.g., a research project, the field study or a community intervention project. Alternatively, the student may develop a novel topic of his/her own interest, e.g., a policy proposal on a public health issue or a research proposal.</li> <li>- Students meet with their mentors regularly on their progress and make revisions to the paper per feedback given.</li> <li>- Competencies are preselected by the program.</li> </ul>
<p>MPH Foundational Competency:</p> <p>C3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming, and software, as appropriate</p> <p>IDV MPH Concentration Competencies:</p> <p>C1. Apply the following frameworks of principles of infectious disease to describe each infectious disease: microbiology, epidemiology, clinical spectrum, immunology, pathogenesis, treatment, and prevention.</p> <p>C3. Discuss how infectious diseases impact public health problems.</p>	

**Table D7.1.7 MPH Integrative Learning Experience for Maternal, Child, and Adolescent Health**

Integrative learning experience	How competencies are synthesized
Capstone Research Project	<ul style="list-style-type: none"> <li>- Students enroll in PB HLTH 210E: Practicum in MCH Data Analysis I and PB HLTH 210F: Practicum in MCH Data Analysis II.</li> <li>- The topic for the capstone project is the student's choice, based upon their interests.</li> <li>- Each student will have a capstone chair, who will read the entire paper and provide detailed feedback. In some cases, the student may also have one to two additional members who will meet periodically with them to discuss the research question and findings and give advice on the project, but who might not read the entire paper.</li> <li>- Competencies are preselected by the program.</li> </ul>
<p>MPH Foundational Competency:</p> <p>C4. Interpret results of data analysis for public health research, policy or practice</p> <p>MCAH MPH Concentration Competencies:</p> <p>C1. Discuss a problem facing MCAH populations with an evidence-based rationale for why it is a topic of importance.</p> <p>C4. Interpret results of epidemiologic studies of maternal and child health problems and synthesize published epidemiological literature in order to summarize current knowledge and make recommendations to improve maternal and child health.</p> <p>C5. Apply basic principles of quantitative research and epidemiology for understanding and addressing MCAH problems.</p>	

**Table D7.1.8 MPH Integrative Learning Experience for Public Health Nutrition**

Integrative learning experience	How competencies are synthesized
ILE Paper	<ul style="list-style-type: none"> <li>- 2-year and 4+1 MPH students in the PHN concentration enroll in one of the following courses: PB HLTH 204A: Mass Communications, PB HLTH 207: Transformative Food Systems, PB HLTH 218B: Evaluation of Health and Social Programs, PB HLTH 219E: Qualitative Methods, PB HLTH 220D: Health Policy Advocacy, PB HLTH 245: Multivariate Statistics, CY PLAN C256/PB HLTH C233: Healthy Cities, or other courses upon approval by the faculty advisor. 11-Month MPH students in the PHN concentration enroll in PB HLTH 206C: Nutritional Epidemiology.</li> <li>- The written assignment product of the course chosen will serve as the ILE paper, and will need to be submitted to the program prior to graduation. The topic of the course and/or paper needs to be related to food/nutrition, physical activity, etc. For 11-Month students, the ILE will be comprised of a simple data analysis (multiple linear regression using STATA) with an accompanying paper.</li> <li>- Competencies are preselected by the program.</li> </ul>
<p>MPH Foundational Competencies:</p> <p>C3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming, and software, as appropriate.</p> <p>C4. Interpret results of data analysis for public health research, policy, or practice</p> <p>PHN Concentration Competency:</p> <p>C4. Evaluate nutrition research and interpret the implications for public health policies and programs.</p>	

**Table D7.1.9 MPH Integrative Learning Experience for Interdisciplinary MPH (11-month residential)**

Integrative learning experience	How competencies are synthesized
MPH Research Project (Oral Presentation and Final Report)	<ul style="list-style-type: none"> <li>- Students enroll in PB HLTH 292.1: Interdisciplinary MPH Seminar (summer), PB HLTH 292.4: Interdisciplinary MPH Seminar (fall), and PB HLTH 292.7: Interdisciplinary MPH Seminar (spring).</li> <li>- Competencies are preselected by the program.</li> </ul>
<p>MPH Foundational Competency:</p> <p>C4. Interpret results of data analysis for public health research, policy or practice</p> <p>Interdisciplinary MPH Concentration Competencies:</p> <p>C1. Demonstrate methodological expertise for public health research in choosing appropriate study designs, in calculating and interpreting measures of health risks, disease and their associations.</p> <p>C5. Evaluate public health research, summarize current knowledge, interpret the implications for public health policies and programs, and make recommendations for improvement.</p>	

**Table D7.1.10 MPH Integrative Learning Experience for Online MPH (OOMPH)**

Integrative learning experience	How competencies are synthesized
Comprehensive Exam	<ul style="list-style-type: none"> <li>- The comprehensive exam is a timed assessment and includes four long essay questions, two short essay questions, and 21 multiple-choice, matching, and short answer questions. The long essays, comprising 50% of the exam score, are how students demonstrate synthesis and integration of CEPH foundational and concentration competencies.</li> <li>- Competencies for synthesis are preselected by the program for each long essay question. The faculty who teach the required breadth, core and program courses as well as the concentration faculty leads contribute the questions to the exam.</li> <li>- Students select two of four long essay questions. Each question requires the synthesis of three competencies including at least one foundational and one concentration competency. Starting in Spring 2023, students will be required to answer one synthesis long essay question pertaining to their concentration and will choose a second question from the remaining options that cover breadth and core courses.</li> </ul>

**(2) Briefly summarize the process, expectations, and assessment for each integrative learning experience.**

Environmental Health Sciences

Students in the Division of Environmental Health Sciences are required to complete an Integrated Learning Experience that demonstrates knowledge and skills gained in the MPH program in Environmental Health Sciences (EHS).

Within the experience, students incorporate the knowledge and skills gained through their coursework and other public health experiences into a final, culminating thesis that undertakes research on a knowledge gap in environmental health. Student theses take many acceptable formats, including testing a specific hypothesis(es) in environmental health by analyzing data and interpreting study results; evaluating an environmental health program or intervention; developing an instrument, algorithm or method; conducting a systematic review and synthesis of prior knowledge on a topic; or developing a program, training, or procedure for a community partner.

MPH students can complete the Integrated Learning Experience and write up the required Master's thesis as part of the two-semester seminar course PB HLTH 292 (three units in the fall of the final year, two units in the spring of the final year) or by enrolling in two semesters of independent research (PB HLTH 299) under a faculty advisor during the final year. Students must enroll in PB HLTH 292 until they have successfully engaged with a faculty advisor to enroll in PB HLTH 299. If a student has not enrolled in PB HLTH 299 by the start of the third week of the semester, they must stay enrolled in PB HLTH 292.

Planning of the thesis occurs during the fall semester of their PB HLTH 292 thesis seminar or their PB HLTH 299 thesis independent study with faculty. Students discuss with faculty potential knowledge gaps and research questions to pursue; the formats and requirements for the thesis; the expectations and rubric used to evaluate the thesis; and the required synthesis of foundational and concentration competencies.

Monitoring of the development and progress of the thesis project is achieved through turning in thesis drafts to instructors (PB HLTH 292) or faculty thesis advisors (PB HLTH 299), including at least one draft in the fall semester, and at least two drafts in the spring semester. Drafts are critiqued by faculty readers (PB HLTH 292) or faculty thesis advisors (PB HLTH 299) to provide student ongoing feedback and input to strengthen their approach, presentation of results, and synthesis of competencies.

Assurance of the quality and rigor of the thesis is achieved via assessments of thesis drafts by an assigned faculty reader (PB HLTH 292) or the student's faculty thesis advisor (PB HLTH 299) who has knowledge of the subject area using a comprehensive rubric covering the quality and rigor of their identification of a knowledge gap, methods for addressing the gap, presentation of results, a summary of their findings and their implications, and the students demonstration of synthesis of their selected foundational and program-specific competency.

Students enrolled in the MPH/MCP and MPH/MJ programs follow the same capstone project policies and procedures as the standalone MPH concentration in EHS.

Epidemiology and Epidemiology/Biostatistics

Each student in the Epidemiology and Epidemiology/Biostatistics master's programs is required to submit a written paper by a given deadline early in the spring semester and to present/defend that paper. Papers submitted by the deadline must be considered final. The defense of the paper in the spring semester in the presence of two or more faculty is designed to meet the requirement of the Graduate Division and the School of Public Health for an oral examination. All students must receive a separate passing grade for the paper and the oral examination in order to receive the MPH degree.



Students can elect to write one of the three types of papers addressing an epidemiological topic:

1. A systematic review;
2. A formal meta-analysis; or
3. An article describing the results of original epidemiologic research that includes secondary data analysis conducted by the student.

Regardless of the type of paper written, there are five features that should be common to all the papers submitted to fulfill this requirement:

1. The paper must be original work done by the student;
2. The paper must demonstrate that it is built on existing knowledge;
3. The paper must demonstrate knowledge of/competence in basic concepts related to epidemiologic research (e.g. study design and analysis, bias, confounding, effect modification, etc.);
4. The paper must make clear the relevance of the topic to health/public health; and
5. The paper must be well written.

In addition to the written paper, students are required to give a brief oral presentation of their paper in the required spring MPH seminar. The presentation will be reviewed by at least one faculty member and one peer reviewer. In this oral presentation, the student will be expected to defend his or her written paper and, in the process, demonstrate competence in and a firm grasp of epidemiologic and biostatistical methods and approaches relevant to studies of disease causation and prevention. Students will be provided with feedback on both the written and presentation portions of the master's paper project.

Students enrolled in the MPH/MJ program follow the same capstone project policies and procedures as the standalone MPH concentration in Epidemiology/Biostatistics.

### Global Health and Environment

Students in the Division of Environmental Health Sciences are required to complete an Integrated Learning Experience that demonstrates knowledge and skills gained in the MPH program in Global Health and Environment (GHE).

Within the experience, students incorporate the knowledge and skills gained through their coursework and other public health experiences into a final, culminating thesis that undertakes research on a knowledge gap in environmental health. Student theses take many acceptable formats, including testing a specific hypothesis(es) in environmental health by analyzing data and interpreting study results; evaluating an environmental health program or intervention; developing an instrument, algorithm, or method; conducting a systematic review and synthesis of prior knowledge on a topic; or developing a program, training or procedure for a community partner.

MPH students can complete the Integrated Learning Experience and write up the required master's thesis as part of the two-semester seminar course PB HLTH 292 (three units in the fall of the final year, two units in the spring of the final year) or by enrolling in two semesters of independent research (PB HLTH 299) under a faculty advisor during the final year. Students must enroll in PB HLTH 292 until they have successfully engaged with a faculty advisor to enroll in PB HLTH 299. If a student has not enrolled in PB HLTH 299 by the start of the third week of the semester, they must stay enrolled in PB HLTH 292.

Planning of the thesis occurs during the fall semester of their PB HLTH 292 thesis seminar or their PB HLTH 299 thesis independent study with faculty: students discuss with faculty potential knowledge gaps and research questions to pursue; the formats and requirements for the thesis; the expectations and rubric used to evaluate the thesis; and the required synthesis of foundational and concentration competencies.

Monitoring of the development and progress of the thesis project is achieved through turning in thesis drafts to instructors (PB HLTH 292) or faculty thesis advisors (PB HLTH 299), including at least one draft in the fall semester, and at least two drafts in the spring semester. Drafts are critiqued by faculty readers (PB HLTH 292) or faculty thesis advisors (PB HLTH 299) to provide student ongoing feedback and input to strengthen their approach, presentation of results, and synthesis of competencies.

Assurance of the quality and rigor of the thesis is achieved via assessments of thesis drafts by an assigned faculty reader (PB HLTH 292) or the student's faculty thesis advisor (PB HLTH 299) who has knowledge of the subject area using a comprehensive rubric covering the quality and rigor of their identification of a knowledge gap, methods for addressing the gap, presentation of results, summarization of their findings and their implications, and the students demonstration of synthesis of their selected foundational and program-specific competency.

### Health and Social Behavior

Completing a capstone project or Integrative Learning Experience (ILE) is required for all students receiving the MPH degree. Courses that fulfill the Health and Social Behavior capstone may be taken in the fall or spring of the student's final year of study. HSB students are able to choose among several options to satisfy this requirement—including a public health analysis, quantitative research project, and a formal master's thesis.

Capstone Option A: Public Health Analysis. The student's capstone product is based on coursework from an approved list of courses along with one-unit PH 299 taken with the instructor of that course. With the approval of the professor, students chose a capstone project that they develop within the parameters of the selected course. The project can take the form of a literature review, research proposal, intervention proposal, policy analysis, or similar document. Students are expected to meet regularly with faculty who provide mentorship and guidance for the research project. Capstone courses must be taken for at least three units to be included as an option.

Capstone Option B: Quantitative Research Project. Students who choose to do a quantitative research project must prepare early in their MPH program in order to complete the required coursework for this option. The student's capstone product is a quantitative research analysis based in one of the quantitative project courses approved for this option and a written component.

Capstone Option C: Master's Thesis. The student's capstone product is a master's thesis submitted directly to the Graduate Division. To select this option, students must prepare earlier in their MPH program in order to complete specific required coursework. Students must also have a written commitment from a faculty advisor and have identified their faculty thesis committee. In addition the student will need to complete the appropriate online Collaborative IRB Training Initiative (CITI) course and submit an Application for Candidacy for the Master's Degree Plan I Thesis to Graduate Division by the end of the semester prior to the semester they plan to graduate.

Concurrent degree students must have a capstone faculty advisor from both degree programs who will help guide the development of the capstone project and approve of the final project, in addition to the oral presentation.

- MSW/MPH students may choose Option A, Option B, or Option C: Master's Thesis Plan I which will satisfy the requirements of both Schools. The joint project is expected to incorporate perspectives from Public Health and Social Welfare. In order to be approved, the topic must be relevant to public health practice in their MPH concentration and address program specific competencies agreed upon by the student and their faculty advisor.
- MCP/MPH students complete a client report or professional report which satisfies the requirement for both Schools. MCP/MPH students should plan to enroll in the City Planning capstone course

in the fall semester of their final year and submit their capstone prospectus for approval by Professor Jason Corburn during the fall semester of their final year. MCP/MPH capstone projects must be supervised by one ladder rank faculty, from either the Department of City and Regional Planning or the School of Public Health. In addition, all capstone projects must be approved by program co-directors in the student's fifth semester.

- MJ/MPH students may choose Option A, Option B, or Option C: Master's Thesis Plan I which will satisfy the requirement of the MPH Program. In order to be approved, the topic must be relevant to public health practice in their MPH concentration and address program specific competencies agreed upon by the student and their faculty advisor.

All MPH and concurrent students must participate in an oral presentation component which will be held during Reading/Review/Recitation week to accommodate students in spring classes. Students will make an oral presentation on their capstone/ILE to faculty and peers at a culminating event in the final spring semester. In the final presentation, students will demonstrate the synthesis of the competencies listed above. Following the student's presentation there is a Q&A session with the advising faculty present to assess and ensure synthesis of competencies.

Students enrolled in the MPH/MSW, MPH/MCP, and MPH/MJ programs follow the same capstone project policies and procedures as the standalone MPH concentration in HSB.

#### Health Policy and Management

The School of Public Health requires all MPH students to successfully complete a culminating experience that tests the depth and breadth of the student's knowledge of public health and the chosen area of concentration. The HPM capstone project, with its written and oral components, assesses the student's ability to demonstrate:

- 1) command of the core HPM skills and knowledge areas;
- 2) ability to synthesize them in an applied manner;
- 3) readiness for professional practice, all together determining; and
- 4) whether the student has met the core and area learning objectives.

Each capstone project will address an HPM topic of interest that has already been selected by the student and approved by the course faculty. Projects must be individual efforts, not done in teams, and the research, analysis, and resulting paper produced for the exam must be an original effort and not duplicate work done for academic credit in any previous or concurrent course (i.e., PB HLTH 299, PB HLTH 223C, PB HLTH 220, PB HLTH 297, PB HLTH 299, MBA 293). Students submit a topic proposal with those competencies noted and an identified client partner (if applicable). They also must recruit two faculty who have demonstrated expertise in either the subject area or some technical aspect of the project (e.g., econometrics, survey design, landscape analysis, financial/budget forecasting, etc.).

After receiving feedback on the feasibility and appropriateness of the topic and approach, the student meets with the course instructor and faculty readers throughout the capstone project on an ad hoc basis. In addition, the student has a formal checkpoint with the course instructor at the end of the first and second months of the semester where the faculty will assess progress against competency goals using a rubric. The student also submits a rough draft of the final paper to their two faculty readers two-thirds of the way through the semester. At that time the faculty readers review and assess the quality of the work to date, alignment with the three competencies and the level of demonstrated synthesis.

At the end of the semester, the course instructor and faculty readers grade the student's final capstone paper and presentation using a rubric that focuses on how well the project goals were achieved as well as mastery of each competency are previously identified.

Students enrolled in the MPH/MBA program follow the same capstone project policies and procedures as the standalone MPH concentration in HPM.

Students in the MPH/MPP program complete an advanced policy analysis (APA) through the UC Berkeley Goldman School of Public Policy. The APA is a nine unit, highly rigorous thesis process involving intensive study of a significant policy issue of the student's choice. The project is often done for a specific client in a public or private policy organization. Students conduct their projects as members of an APA seminar (PP 205), which provides them with a faculty supervisor and a peer group able to supply constructive suggestions. When the completed analysis is found satisfactory by the faculty, it then serves as the student's required thesis. MPH/MPP students select topics in the health domain that involve synthesizing at least three competencies. Assurance of the quality and rigor of the thesis is achieved via assessments of thesis drafts by an assigned faculty reader who has knowledge of the subject area using a comprehensive rubric covering the quality and rigor of their identification of a knowledge gap, methods for addressing the gap, presentation of results, summarization of their findings and their implications, and the students demonstration of synthesis of their selected foundational and program-specific competency.

#### Infectious Diseases and Vaccinology

Students graduating from the MPH Program in Infectious Diseases are expected to possess both core knowledge and critical thinking skills in the area of infectious diseases and a basic understanding of the scope of public health. Students are evaluated for competency in these areas through a capstone project which consist of two components:

1. Preparation of an analytical comprehensive paper on a topic involving infectious diseases in the public health context. This will serve as the student capstone project, a requirement for the MPH degree.
2. Students give an oral presentation of their comprehensive paper in April of their graduating semester.

The purpose of the comprehensive paper is to take the student through the process of writing a professional and academic paper, from formulating a hypothesis, gathering data/information, analyzing the results, coming to conclusion(s) supported by the data, building the structure of the paper, writing, revising, and finalizing the paper with proper references.

The preparation of the comprehensive paper is initiated during the fall term of the second year in the course PB HLTH 264: Current Issues in Infectious Diseases (effective Fall 2022, the course has been renamed Capstone Seminar for Infectious Diseases). Students are expected to identify their paper topic early in the fall semester and present their topics in the PB HLTH 264 class. The topic may build upon the student's own experience, such as a research project, the field study, or a community intervention project. Alternatively, the student may develop a novel topic of his/her own interest, such as a policy proposal on a public health issue or a research proposal.

Students should start working on the comprehensive paper topics early in fall. Once the topics are decided and approved, a faculty mentor will be assigned to the student, who will help the student with the development of the paper.

Students will need to register in the faculty mentor's PB HLTH 299: Independent Study course in their graduating semester. Faculty mentors provide students ongoing feedback, guidance and input to strengthen their approach and structure of the paper, organization of data, presentation of results, and synthesis of competencies. A highly completed draft is due to faculty in mid-February for critique. The final written paper is due in mid-March.

The assigned faculty mentor, who has knowledge of the subject area using a comprehensive rubric covering the quality of the paper, summarization of findings and presentation of the paper and students' demonstration of synthesis of their selected foundational and program-specific competency.

Students enrolled in the MPH/MJ program follow the same capstone project policies and procedures as the standalone MPH concentration in IDV.

### Maternal, Child, and Adolescent Health

Each MCAH student must complete a quantitative capstone research project. This project consists of a written and an oral component and is considered to be the comprehensive examination for MCAH students. The MCAH capstone seminars (Practicum in MCAH Data Analysis I and II) are designed to support students in the capstone process.

The purpose of the MCAH capstone research project is to engage students in learning:

- How to formulate a good research question
- How to identify the appropriate methods to address the research question
- How to test the research question with empirical data
- How to analyze/interpret/summarize and present the findings, linking these to the existing body of scientific literature
- How to present the findings in a formal paper and link them to implications for policy
- How to orally present and defend research findings in an academic setting

The goals of the MCAH capstone research project are to:

- Demonstrate that the student has mastered each of the skills necessary to complete an in-depth quantitatively based research project
- Ensure that the student has attained an in-depth understanding of and exposure to specific MCAH topics that are relevant to their career goals and interests
- Demonstrate proficiency of the topic researched through a written paper and through oral presentation of the research findings to one's peers and faculty

Process:

1. Committee. Each student will have a Capstone chair, who will read the entire paper and provide detailed feedback. In some cases, the student may also have one to two additional members who will meet periodically with them to discuss the research question and findings and give advice on the project, but who might not read the entire paper.
2. Topic. The topic for the capstone project is the student's choice, based upon their interests. Students will not be allowed to pursue a descriptive study, such as a needs assessment, a qualitative study, or a mixed-methods study. Such studies, while valuable, do not provide students with the opportunity to exercise their analytic skills to the extent necessary for a master's degree.
3. Data set. Each student must identify and obtain a dataset that they can use for their research. This may be a publicly available dataset, data collected by school of public health faculty or collaborators, or data from a job or summer internship, etc. All research activities for the capstone must be approved by the UC Berkeley Committee for the Protection of Human Subjects (CPHS) before activities begin.

4. Manuscript. The written portion of the capstone is structured as a standard prepublication manuscript. Approval of the capstone manuscript is similar to the process of having an article accepted for publication.
5. Oral presentation. In addition to submitting a written portion of the capstone to the committee, the student will be required to give a final oral presentation of their research study and findings. The presentation component serves as the oral examination of the comprehensive exam.

Assurance of the quality and rigor of the MCAH capstone is achieved through assessments of the written capstone drafts by an assigned faculty advisor (PB HLTH 299). The faculty advisor has knowledge of the subject area and utilizes track changes within the student's written draft to ensure the quality and rigor of the student's capstone. Faculty advisors focus on the student's identification of a knowledge gap, methods for addressing the gap, presentation of quantitative results, summarization of their findings and their implications, and the students' synthesis of their selected foundational and MCAH-specific competency.

Students enrolled in the MPH/MSW program follow the same capstone project policies and procedures as the standalone MPH concentration in MCAH.

#### Public Health Nutrition

The ILE requirement is designed to review, integrate, and apply concepts and methods presented in the core courses and demonstrate synthesis of foundational and concentration competencies. The ILE paper is the written assignment product of a course chosen from an approved list of courses. With the approval of the PHN Program, students choose an ILE project that they develop within the parameters of the selected course. The project can take the form of a literature review, research proposal, intervention proposal, policy analysis or similar document. Students are expected to meet regularly with faculty who provide mentorship and guidance for the research project. ILE courses must be taken for at least three units and be graduate-level (200 or higher) to be included as an option. The course must be taken for a letter grade and must be completed in the final year of the program. Students will present their ILE work for faculty, mentors, and peers at the annual Public Health Nutrition Soiree in May.

#### Interdisciplinary (11-month residential)

The core IPMPH seminar through summer, fall, and spring semester is a required course (PH 292) for students in the Interdisciplinary MPH Program, and is designed to enhance the knowledge and practice skills of Interdisciplinary MPH students in a collaborative interdisciplinary environment. The core seminar encourages students to integrate their learning and experiences across the MPH curriculum. Program faculty provide guidance and close mentorship for the development and implementation of a culminating MPH research project.

Developing and conducting the MPH research project will give students the opportunity to synthesize their knowledge and skills via a MPH research project that addresses a specific public health challenge. Students can use this opportunity to collaborate with community-based public health organizations for their MPH research project. The MPH research project is valued by many of our students as an opportunity to produce their first peer-reviewed publication.

During the summer session, the weekly seminar will focus on team building, understanding program requirements, engaging with alumni to learn from their experiences during their MPH studies and as PH professionals, receiving guidance for campus-wide selection of elective courses, and discussing principles of community engagement. Students will start the process of shaping broad ideas for a research project into a scientifically relevant, methodologically sound, focused, and manageable MPH research project. Assignments include a first outline of ideas for an MPH research project (August) and the completion of the Myers-Briggs-Personality-Inventory (July).

During the fall semester, the weekly seminar will focus on skill building to complete the project planning process. This includes sessions on different research methodologies such as community based participatory research, qualitative research approaches and mixed methods, social epidemiology, fundamentals of policy analysis, design thinking, survey design, research ethics, and the completion of the IRB approval process if required for the research project. Students develop their MPH research plan in group sessions throughout the semester, based on worksheets designed to help them formulate and refine research objectives, activities and study design. Assignments include the completion of the CITI training (September), a draft project plan (October), a project plan class presentation (November) and a finalized project plan and comprehensive literature review (December). If appropriate for their chosen research, a community partner agreement and an IRB submission is completed.

During the spring semester, the weekly seminar will focus on skills for media advocacy, dissemination of written research results to different audiences (scientific and general audiences), the fundamentals of grant writing, and honing oral presentation skills. Students will conduct and finally analyze their MPH research project. As an assignment, they present their findings to classmates, mentors and alumni during the oral comprehensive exam, and produce a final research report or manuscript for a peer-reviewed publication.

### Online MPH (OOMPH)

The main purpose of the exam is to provide an opportunity for students to apply and demonstrate the knowledge and core competencies they have learned during their time in the program to holistically approach and address public health challenges. Students can draw from a cross-section of their coursework to respond to case study and multiple choice questions.

Faculty Leads for each concentration draft long essay questions related to their concentration. For each long essay, students are given a public health article to read ahead of the exam as well as the competencies they will be asked to synthesize to provide time for students to review course content, lectures and assessments mapped to the competencies and prepare notes to use during the exam. For the exam, the long essays include a series of sub-questions mapped to the competencies that draw on the article as a case study and to help ensure students draft responses that support synthesis in the context of a timed and comprehensive assessment.

In their second-to-last semester, students are invited to begin the Comprehensive (Comp) Exam preparation process. The Comp Exam Prep Group space in bCourses, the online learning management system, includes prep materials and the option to contact and prepare with classmates also taking the exam. Specifically, the Prep Group includes three forums: Exam Community Forum (coordination forum for students), Exam Prep Forum (prep guide and materials), Exam Q & A Forum (monitored by the interdisciplinary faculty lead and instructional designer). In addition, the interdisciplinary faculty lead holds comp exam Q&A group sessions leading up the exam. Students may petition to take the exam earlier than their last semester of coursework or after they have completed their last semester of courses.

The interdisciplinary faculty lead assesses the exam based on the rubric developed by all faculty who contribute content.

**(3) Provide documentation, including syllabi and/or handbooks, that communicates integrative learning experience policies and procedures to students.**

Documentation is available in ERF D7.3.

**(4) Provide documentation, including rubrics or guidelines, that explains the methods through which faculty and/or other qualified individuals assess the integrative learning experience with regard to students' demonstration of the selected competencies.**

Documentation is available in ERF D7.4.

ILE processes to document specific competencies synthesized in each student's ILE and evaluate competency synthesis as part of the grading rubric were implemented in AY 2022-2023.

**(5) Include completed, graded samples of deliverables associated with each integrative learning experience option from different concentrations, if applicable. The school or program must provide at least 10% of the number produced in the last three years or five examples, whichever is greater.**

Samples are available in ERF D7.5.

**(6) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: The ILE is tailored to the student's concentration and individual learning and research goals, with the process managed by the division administering the student's degree. Faculty and students dedicate substantial effort to assure full integration and praxis of knowledge, tools, skills, and competencies that the student has acquired over the course of their study, true to the intent of the ILE.

Weaknesses: Prior to AY 2022-2023, ILE processes did not include documentation of specific competencies synthesized in each student's ILE and evaluation of competency synthesis as part of the grading rubric. As part of the self-study process, faculty who oversee the capstone experiences were actively engaged in designing processes by which competencies for synthesis are identified and, if applicable, preselected.

Plans for Improvement: Starting with capstone projects initiated in AY 2022-2023, ILE processes will fulfill CEPH requirements related to planning, monitoring, and assurance of competency synthesis.



## D8. DrPH Integrative Learning Experience

As part of an integrative learning experience, DrPH candidates generate field-based products consistent with advanced practice designed to influence schools, policies or systems addressing public health. The products demonstrate synthesis of foundational and concentration-specific competencies.

The integrative learning experience is completed at or near the end of the school of study. It may take many forms consistent with advanced, doctoral-level studies and university policies but must require, at a minimum, production of a high-quality written product.

- (1) List, in the format of Template D8-1, the integrative learning experience for each DrPH concentration or generalist degree. The template also requires the school or program to explain, for each experience, how it ensures that the experience demonstrates synthesis of competencies.

**Table D8.1.1 DrPH Integrative Learning Experience**

Integrative learning experience	How competencies are synthesized
Dissertation	<p>DrPH students fulfill the Integrated Learning experience by completion of a dissertation. Students must follow DrPH dissertation guidelines outlined in the DrPH student handbook. The dissertation is a high-quality product that addresses a significant issue in public health. Prior to engagement in the dissertation, DrPH students self-identify four competencies (two DrPH foundational competencies and two DrPH concentration competencies) and develop a <i>dissertation prospectus</i> that provides significant detail of their proposed dissertation project. The <i>dissertation prospectus</i> is developed by the student in consultation with their dissertation chair, qualifying exam chair, and other committee members. It provides a description of the proposed research question(s), a concise background and literature review and justifies the need for the study; includes the proposed methodological approach that will be used to answer the research question. DrPH students complete the <i>dissertation prospectus</i> prior to the qualifying exam (QE), and must successfully pass their qualifying exam to engage in their dissertation research.</p> <p>Upon successful completion of the qualifying exam, DrPH students submit a signed copy, by the qualifying exam chair, of the DrPH dissertation approval form. This approval form contains the four self-identified DrPH competencies along with a two-page description of their proposed dissertation research, including how the proposed dissertation project will synthesize the selected competencies. Once the student has passed the qualifying exam and submitted the DrPH dissertation approval form, they engage in and complete all aspects of the research and write the dissertation manuscript. Faculty on the dissertation committee evaluate that the student has attained the self-identified competencies and completed the dissertation by using the DrPH dissertation completion form as satisfied/unsatisfied, prior to submission of their dissertation to Graduate Division for completion. For any student that receives an unsatisfactory grade, the committee members must give reasons and work with the student to meet dissertation requirements.</p>

Integrative learning experience	How competencies are synthesized
	<p>The dissertation allows for one of three options: a standard dissertation, a three-paper option, or an alternate single dissertation format acceptable to the student's dissertation committee.</p> <p><u>Option 1.</u> A standard dissertation incorporates the following specified content:</p> <ul style="list-style-type: none"> <li>• Statement of the public health problem or opportunity and the resulting research question</li> <li>• Critical review of the scientific literature relevant to that problem or opportunity</li> <li>• Conceptual framework that includes the relevant social, scientific, economic, political, environmental, human rights, administrative, and/or cultural context</li> <li>• Description of the study design or data sources and analytic methods used to answer the research question.</li> <li>• Analytic results and their implications for the problem or opportunity under study</li> <li>• Recommendations based on the results of the study</li> <li>• Strategy for implementing and evaluating the recommendations, taking into consideration the contextual factors identified in the conceptual framework</li> </ul> <p><u>Option 2.</u> The three-paper option format will include three articles of publishable quality along with 1) a separate introduction and 2) an integrative conclusions section. The three papers will be written in the format required by peer-reviewed journals identified by the student and approved by their dissertation committee. Dissertation committees may require additional documentation to assess the student's work (e.g., extended methods section). This additional work should be part of the integrating documents and not the individual articles which should be of publishable length and content. Exception may be sought to substitute an alternate product for one of the papers (e.g., DVD, website, or educational pamphlet). The exception process will include approvals by the student's dissertation committee and the DrPH program directors.</p> <p><u>Option 3.</u> Alternate single dissertation formats (e.g., a book) are acceptable if approved by the student's dissertation committee.</p>

DrPH students self-identify four competencies, two of the DrPH foundational competencies and two DrPH concentration competencies. This is done in consultation with the student's qualifying exam and dissertation chairs and committee members. Students then complete the DrPH dissertation approval form which is signed by the qualifying exam chair and sent to the DrPH program administration.

**(2) Briefly summarize the process, expectations, and assessment for each integrative learning experience.**

Prior to conducting the proposed research DrPH students must pass their qualifying exam. Students may sit for their qualifying exam after they have completed all required coursework, except for the third year doctoral seminars. The qualifying exam is designed in part to test the student's knowledge of and familiarity with conceptual, methodological, substantive, and related areas necessary for successful completion of the Dissertation project and identified foundational and core competencies. Once the qualifying exam is complete, students obtain a signed copy of the DrPH dissertation approval form which contains the four self-identified DrPH competencies and a two-page overview of their dissertation project. This is filed with the DrPH program administration. The Dissertation is complete when all committee members have approved the final product and signed the paperwork for submission to the Graduate Division and signed the DrPH Dissertation Completion Form and filed it with DrPH program administration.

**(3) Provide documentation, including syllabi and/or handbooks, that communicates integrative learning experience policies and procedures to students.**

Documentation is available in ERF D8.3:

- DrPH Student Handbook
- DrPH Dissertation Approval Form
- DrPH Dissertation Completion Form
- Syllabus Course PH 293 C
- Syllabus Course PH 293 D
- Syllabus Course PH 293 E
- Syllabus Course PH 293 F

**(4) Provide documentation, including rubrics or guidelines, that explains the methods through which faculty and/or other qualified individuals assess the integrative learning experience with regard to students' demonstration of the selected competencies.**

Documentation is available in the [UC Berkeley Graduate Division Guide to Graduate Policy](#).

DrPH students fulfill the Integrated Learning Experience through the completion of the dissertation. The dissertation is a multi-step process, from the development of the *dissertation prospectus* through completion of the full project. Through the first four semesters of doctoral seminars (293 A-D) students develop and refine their research question and develop their dissertation prospectus. Development of the research question is in the first year seminars (PH 293 A and PH 293 B) and development of the full dissertation prospectus is in doctoral seminars (PH 293 C and PH 293 D), with graded assignments throughout the semester. Additionally, students prepare for their qualifying exam which is designed in part to test the student's knowledge of and familiarity with conceptual, methodological, substantive, and related areas necessary for successful completion of the dissertation project and research questions as outlined in the prospectus. At the end of the qualifying exam [faculty evaluate](#) the students knowledge and ability to carry out the dissertation product as outlined by the campus Graduate Division. The qualifying exam chair signs the DrPH dissertation approval form that includes the student self-identified competencies, a two-page description of the dissertation project proposal; and a description of how the proposed project will synthesize the selected competencies. Once the student has passed the qualifying exam and submitted the dissertation approval form, the student will conduct and complete all aspects of the project to fulfill the requirements of the dissertation.

DrPH students take two additional doctoral seminars (PH 293 E and PH 293 F) to support the completion of the dissertation research. At the completion of the dissertation, committee members will evaluate the project and sign the DrPH dissertation completion form, and the student will submit it to the DrPH program administration.

- (5) Include completed, graded samples of deliverables associated with each integrative learning experience option from different concentrations. The school or program must provide at least 10% of the number produced in the last three years or five examples, whichever is greater. If the school or program does not have five recent samples for an option, note this and provide all available samples.**

Documentation is available in ERF D8.5.1.

- (6) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Students in the DrPH program must have a minimum of two years experience in public health; most of our students have many more years of experience. Their dissertation products are a reflection of their deep understanding and commitment to communities and the public health systems that surround them. DrPH students engage in intensive, high-quality, transdisciplinary research that has direct implications for public health policy, research, and practice.

Weaknesses: The DrPH ILE is an incredibly intensive rigorous dissertation which results in high-quality academic publications not unlike other PhD programs. Our plan for improvement is to expand ILE to applied practice and leadership which may require a realignment with ILE to the mission of the program and an expansion of practice-based faculty serving on committees.

---

## **D9. Public Health Bachelor's Degree Foundational Domains**

---

The requirements for the public health major or concentration provide instruction in the domains. The curriculum addresses these domains through any combination of learning experiences throughout the requirements for the major or concentration coursework (i.e., the school may identify multiple learning experiences that address a domain—the domains listed below do not each require a single designated course).

If the school intends to prepare students for a specific credential, the curriculum must also address the areas of instruction required for credential eligibility (e.g., CHES).

- (1) Provide a matrix, in the format of Template D9-1, that indicates the courses/experience(s) that ensure that students are exposed to each of the domains indicated. Template D9-1 requires the school or program to identify the learning experiences that introduce and cover each domain. Include a footnote with the template that provides the school or program's definition of "introduced" and "covered."

**Table D9.1.1 Public Health Bachelor's Degree Foundational Domains**

<b>Key</b>	I = Introduced: Students gain knowledge through instructor delivery of content, instructional material, and/or other course-related materials. Introduced content may not be directly assessed; it may support rather be central to the content of the course.
	C = Covered: Students are assessed on the concept through homework, quizzes, projects, essays, or exams. Covered content is directly assessed in the course and is central to the course content.

<b>Public Health Domains</b>	<b>Course Number &amp; Name</b>					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
<b>Math/ Quantitative Reasoning: Identify and apply the concepts and applications of basic statistics</b>						
<b>Concepts of basic statistics</b>					C	
<b>Applications of basic statistics</b>	C				I	
<b>Science: Address the foundations of biological and life sciences</b>						
<b>Foundations of biological &amp; life sciences</b>	C					

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
<b>Overview of Public Health: Address the history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society</b>						
<b>Public health history</b>	I	I	C	C		
<b>Public health philosophy</b>			C	C		
<b>Core PH values</b>		C	C	C		
<b>Core PH concepts</b>	I	I	C	C	I	
<b>Global functions of PH</b>		C				
<b>Societal functions of PH</b>		C	C	C		

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
<b>Role and Importance of Data in Public Health: Address the basic concepts, methods, and tools of public health data collection, use, and analysis and why evidence-based approaches are an essential part of public health practice</b>						
<b>Basic concepts of data collection</b>	C			C	C	C
<b>Basic methods of data collection</b>	C			C	C	C
<b>Basic tools of data collection</b>	C			C	C	C
<b>Data usage</b>	C	I		C	C	C
<b>Data analysis</b>	C	I		I	C	C
<b>Evidence-based approaches</b>	C				C	I



Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
Identifying and Addressing Population Health Challenges: Address the concepts of population health, and the basic processes, approaches, and interventions that identify and address the major health-related needs and concerns of populations						
Population health concepts	C	C		C	I	I
Introduction to processes & approaches to identify needs & concerns of populations				C		
Introduction to approaches & interventions to address needs & concerns of populations				C		

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
<b>Human Health: Address the underlying science of human health and disease including opportunities for promoting and protecting health across the life course</b>						
<b>Science of human health &amp; disease</b>	C	C		I		
<b>Health promotion</b>	I	C		C		
<b>Health protection</b>	C	C		C		
<b>Determinants of Health: Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities</b>						
<b>Socio-economic impacts on human health &amp; health disparities</b>	C	C	I	C		
<b>Behavioral factors impacts</b>	C	C	I	C		

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
on human health & health disparities						
Biological factors impacts on human health & health disparities	C	C	I	C		
Environmental factors impacts on human health & health disparities	C	C	I	C		
Project Implementation: Address the fundamental concepts and features of project implementation, including planning, assessment, and evaluation						
Introduction to planning concepts & features	I	C				
Introduction to assessment concepts & features	I	C				
Introduction to evaluation concepts & features	I	C				

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
features						
Overview of the Health System: Address the fundamental characteristics and organizational structures of the U.S. health system as well as to the differences in systems in other countries						
Characteristics & structures of the U.S. health system			C			
Comparative health systems			C			

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
<b>Health Policy, Law, Ethics, and Economics:</b> Address the basic concepts of legal, ethical, economic, and regulatory dimensions of health care and public health policy, and the roles, influences, and responsibilities of the different agencies and branches of government						
<b>Legal dimensions of health care &amp; public health policy</b>			C			
<b>Ethical dimensions of health care &amp; public health policy</b>			C			
<b>Economical dimensions of health care &amp; public health policy</b>			C			

Public Health Domains	Course Number & Name					
	PB HLTH 150A: Introduction to Epidemiology and Human Disease	PB HLTH 150B: Human Health and the Environment in a Changing World	PB HLTH 150D: Introduction to Health Policy and Management	PB HLTH 150E: Introduction to Community Health & Human Development	PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health	DATA C8: Foundations of Data Science
Regulatory dimensions of health care & public health policy			C			
Governmental agency roles in health care & public health policy			C			
Health Communications : Address the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology						
Technical writing	C	C				
Professional writing	C	C		C		
Use of mass media			C			
Use of electronic technology	C	C		I		

- (2) Include the most recent syllabus from each course listed in Template D9-1, or written guidelines, such as a handbook, for any required experience(s) listed in Template D9-1 that do not have a syllabus.**

Documentation is available in ERF D9.2.

- (3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Five public health core courses and one lower division public health major course ensure that students are exposed to each of the public health domains.

## D10. Public Health Bachelor's Degree Foundational Competencies

Students must demonstrate the following competencies:

- the ability to communicate public health information, in both oral and written forms, through a variety of media and to diverse audiences
- the ability to locate, use, evaluate and synthesize public health information

(1) Provide a matrix, in the format of Template D10-1, that indicates the assessment opportunities that ensure that students demonstrate the stated competencies.

Table D10.1.1 Public Health Bachelor's Degree Foundational Competencies

Competencies	Course number(s) & name(s)	Specific assessment opportunity
<b>Public Health Communication:</b> Students should be able to communicate public health information, in both oral and written forms and through a variety of media, to diverse audiences		
<b>Oral communication</b>	<b>PB HLTH 150E:</b> Introduction to Community & Urban Health	<b>Lightning Talk:</b> In class, students will discuss frameworks, some history, and features of healthy cities. Then the assignment is as follows: each student will offer their OWN definition of a healthy city. They are required to think about a place where they felt most alive, supported, happy, or healthy. Where was this place? What did it look like? What are the features they most remember? Students must record a presentation of five minutes and address the following prompts: <ul style="list-style-type: none"> <li>• How would you define a healthy city? What features would it have?</li> <li>• Offer an example or two of healthy cities and/or features of a healthy city from the real world using images. These should help the audience understand the image of a healthy city.</li> <li>• Give examples of some measures or indicators that would help you know when or if the city is healthy.</li> </ul>



Competencies	Course number(s) & name(s)	Specific assessment opportunity
Written communication	<b>PB HLTH 150A:</b> Introduction to Epidemiology and Human Disease	<b><u>Group Project Assignment:</u></b> Students work in groups to design and present a hypothetical epidemiology study of an exposure and health outcome to be presented at a hypothetical Annual Epidemiology Society meeting. The group project assignment includes a final written proposal with the following components: background/literature review, study question, methods, special considerations (biases, confounders, EMM), discussion, and references. Students are graded using a provided rubric on overall organization, writing, and presentation. The grading rubric includes assessment of each group member making a substantial contribution in the group project.
Communicate with diverse audiences	<b>PB HLTH 150D:</b> Introduction to Health Policy and Management	<b><u>Health Policy News Article Presentation:</u></b> Students choose a health policy news article from a major newspaper, identify at least two different stakeholders and present the information appropriately for the identified stakeholders. Students are evaluated on the level, tone and appropriateness of how they present the information to their identified stakeholders who comprise a diverse audience.
Communicate through variety of media	<b>PB HLTH 150B:</b> Introduction to Environmental Health Sciences	<b><u>EOH Topic Presentation:</u></b> Students prepare a 10-minute presentation on an environmental or occupational health topic of interest. This can be something in the news, a historic occurrence, or something of personal concern. Students must demonstrate an understanding of the issues surrounding the topic from political and scientific lenses. Students must provide citations. Then students prepare a related video on TikTok/Instagram stories (45-60 seconds) or an Instagram post (four to six photos or graphics) about the chosen topic. The goal of this part of the assignment is to disseminate information on an environmental or occupational health issue using a variety of media.

Competencies	Course number(s) & name(s)	Specific assessment opportunity
<b>Information Literacy:</b> Students should be able to locate, use, evaluate and synthesize public health information		
<b>Locate information</b>	<b>PB HLTH 150A:</b> Introduction to Epidemiology and Human Disease	<b>Group Project Assignment:</b> Students work in groups to design and present a hypothetical epidemiology study of an exposure and health outcome to be presented at a hypothetical Annual Epidemiology Society meeting. The group project assignment includes a final written proposal with the following components: background/literature review, study question, methods, special considerations (biases, confounders, EMM), discussion, and references. The project includes a comprehensive literature search where students have to locate background information relevant to their study. Students are graded using a provided rubric on overall organization, writing, and presentation. The grading rubric includes assessment of each group member making a substantial contribution in the group project.

Competencies	Course number(s) & name(s)	Specific assessment opportunity
<b>Use information</b>	<b>PB HLTH 150D:</b> Introduction to Health Policy and Management	<b><u>Position Paper - Health Care Policy</u></b> <b><u>Today:</u></b> Students pick one from a short list of current health policy issues and provide a short but thorough analysis, arguing either for or against the proposed policy change (no longer than four pages, double-spaced). They are required to write a paper that should be written from the perspective of their assigned character and from today's status quo. it can take the form of a memo, a letter or speech, for example. Each student's analysis must include the following components: 1) A short summary of the healthcare policy landscape today. 2) A statement of the student character's position on the issue 3) Explanation of at least two short-term and two long-term effects of the issue. Students must consider both direct and indirect possible impacts. A full bibliography is required.
<b>Evaluate information</b>	<b>PB HLTH 150B:</b> Introduction to Environmental Health Sciences	<b><u>Policy and Technical Brief:</u></b> Students will research an environmental or occupational health topic of their choice and develop a policy/technical brief aimed at changing knowledge, attitudes, or practices. The brief will be a four- to six-page policy or technical brief on any issue relevant to occupational or environmental health. The brief will consider a topic relevant to occupational or environmental health, review the problem and its importance, and consider any research gaps in the area. For this assignment students will be expected to: 1) determine the target audience of the written product and design your product appropriately; 2) identify gaps in knowledge, attitudes, and/or practices related to a specific topic in EOH; 3) consider current and potential policies at multiple levels.

Competencies	Course number(s) & name(s)	Specific assessment opportunity
Synthesize information	<b>PB HLTH 150D:</b> Introduction to Health Policy and Management	<b><u>U.S. Health Care System Debates:</u></b> Students are randomly assigned to groups and topics, and are required to present arguments in a clear and concise manner with details and accuracy. Students are asked to prove their statements—supporting them with facts, studies, and other evidence from references. They are also expected to anticipate and refute the opposing side's argument. The assignment uses a modified version of the Oxford Style debate format. The rules of the debate include that each member must participate; with participation as evenly allocated as possible. During the debate, the rules are strictly enforced by the graduate student instructor moderator. The structure of the debate is: <u>Opening Statement:</u> Background and lay the groundwork for arguments. Set the scene and frame the debate. This should be prewritten. <u>Main Argument:</u> This is the core of the team's debate. This is heavy with evidence and logic supporting the position. The vast majority of this speech should be prewritten. <u>Rebuttal Conference:</u> Time to discuss with the team, the opposing team's argument, and prepare a response. <u>Rebuttal:</u> A team's response to the opposing team's main argument. Students are expected to directly refute the facts that the opposing team has presented. This should not be prewritten, but synthesized based on what the other team has presented. <u>Closing Argument:</u> Each team summarizes what has been presented and makes any last, strongest arguments.

- (2) Include the most recent syllabus from each course listed in Template D10-1, or written guidelines, such as handbook, for any required elements listed in Template D10-1 that do not have a syllabus.**

Documentation is available in ERF D10.2.

- (3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Students develop and apply knowledge from multiple public health disciplines, and are assessed on public health communication and information literacy competencies in the required public health core courses.

## D11. Public Health Bachelor's Degree Cumulative and Experiential Activities

Students have opportunities to integrate, synthesize and apply knowledge through cumulative and experiential activities. All students complete a cumulative, integrative, and scholarly or applied experience or inquiry project that serves as a capstone to the education experience. These experiences may include, but are not limited to, internships, service-learning projects, senior seminars, portfolio projects, research papers or honors theses. Schools and programs encourage exposure to local-level public health professionals and/or agencies that engage in public health practice.

- (1) Provide a matrix, in the format of Template D11-1, that identifies the cumulative and experiential activities through which students integrate, synthesize, and apply knowledge as indicated.

**Table D11.1.1 Public Health Bachelor's Degree Cumulative and Experiential Activities**

Cumulative and Experiential Activity (internships, research papers, service-learning projects, etc.)	Narrative describing how activity provides students the opportunity to integrate, synthesize and apply knowledge.
Honors Thesis, Original Research (a)	Students develop research questions, specific aims, null and alternative hypotheses, conduct a full literature search, develop background, establish statistical methods, conduct data analysis, interpret results, summarize findings and contribution to the literature, and give an oral presentation. In many cases they publish the work in a journal with their faculty mentor.
Research Review or Position Paper (a, e, f, i, j)	Students develop research question or topic for literature review, conduct a full literature search, develop background, summarize findings, support position. Can be a debate. For example: PB HLTH 253B Epidemiology and Control of Infectious Diseases: Students are required to prepare a research paper during the semester about an ongoing debate or unresolved issue in infectious diseases.
Portfolio Project (c)	Students complete a life career planning framework, resume and cover letter, job search strategy with timeline, and career action plan.
Research Proposal (d, f)	Students develop research question, specific aims, null and alternative hypothesis, conduct a full literature search, develop background, propose methods for analysis, power calculations, strengths and limitations of the proposed work.

Cumulative and Experiential Activity (internships, research papers, service-learning projects, etc.)	Narrative describing how activity provides students the opportunity to integrate, synthesize and apply knowledge.
Development of Human Subjects Research Proposal (b)	Students develop skills important for conducting research on human subjects. Using a fictitious grant proposal, students work in teams to create a protocol submission using identical procedure approved by the Office on Protection of Human Subjects at UC Berkeley. Students develop each component of protocol including a consent form with all required sections. Students learn about different levels of IRB review and complete CITI training in both biomedical and social sciences research training.
Project (or Case) Based Learning Project (b, g, h, i, j)	Students acquire a deeper knowledge through active exploration of real-world challenges and problems. Students learn about a subject by working in teams for an extended period of time to investigate and respond to a complex question, challenge, or problem in public health. Both written and oral components are included.
Applied Data Analysis and Interpretation of Results (a, b, d)	Students expand STATA or R skills, or utilize public software (example PLINK) to analyze real data. Students learn to load and clean data files; create new variables; perform data summaries; code a variety of statistical tests; summarize and interpret results; and troubleshoot coding problems.
Deconstruction of a Scientific Research Article (b, d, g, k)	Students will choose or be assigned original research articles (individually or in groups) to comprehensively read each section (methods, results, introduction, conclusion, abstract, supplementary information). Students will be required to summarize key concepts and findings for each paper. Both written and oral components are included.
Oral Communication Skills in Public Health (a, b, c, d, e, f, g, h, i, j, k)	Students are required to review assigned topics or journal articles, prepare written summaries and/or powerpoint slides, and make oral presentations to demonstrate understanding of public health concepts. For example: PB HLTH 253B Epidemiology and Control of Infectious Diseases: Most weeks of the semester, a group of students will present about one of the pathogens featured in the weekly topical discussions. These presentations will be succinct, 10-minute presentations about the descriptive epidemiology of the pathogen/condition using PowerPoint (or equivalent presentation software). The presentation is intended to sharpen oral communication skills and to prepare students for the real-world time constraints one might encounter in a conference presentation, business idea pitch, meeting report, or interview.

<b>Cumulative and Experiential Activity</b> (internships, research papers, service-learning projects, etc.)	<b>Narrative describing how activity provides students the opportunity to integrate, synthesize and apply knowledge.</b>
Visits to Community Organizations in Public Health (g, j)	Students choose one of several local community health organizations. They are required to research the organization and understand its purpose. They are also required to write a report that addresses several objectives including efficacy of any programs offered by the organization, population(s) served, and potential careers at the organization.
Exposure to Local-Level Public Health Professionals (b, c, d, g, h, i, j)	Through guest lectures, career panels, and informational interviews, exposure to public health professionals is integrated into classroom learning.

## PH Capstone Courses:

- a. PB HLTH 195A/B: Public Health Honors Thesis
- b. PB HLTH 155A: Research Seminar (offered Fall 2022)
- c. PB HLTH 155D: Preparation for Public Health Practice and Leadership Seminar
- d. PB HLTH C256: Human Genome, Environment, and Public Health (offered Spring 2023)
- e. PB HLTH 253B: Epidemiology and Control of Infectious Diseases (offered Spring 2023)
- f. PB HLTH 252C: Intervention Trial Design
- g. PB HLTH 207A: Public Health Aspects of Maternal and Child Nutrition (offered Fall 2022)
- h. PB HLTH 130: Advanced Health Policy and Politics (offered Spring 2023)
- i. PB HLTH 170C: Drinking Water and Health
- j. PB HLTH 207: Transforming the Food System: From Agroecology to Population Health (offered Fall 2022)
- k. PB HLTH 265: Molecular Parasitology

**(2) Include examples of student work that relate to the cumulative and experiential activities.**

Samples are available in ERF D11.2.

**(3) Briefly describe the means through which the school or program implements the cumulative experience and field exposure requirements.**

All students complete a cumulative, integrative, and scholarly or applied experience or inquiry project that serves as a capstone to the education experience. This is done through the completion of approved coursework that provides opportunities to integrate, synthesize, and apply concepts and methods presented in the core breadth courses (PB HLTH 150A, PB HLTH 150B, PB HLTH 150D and PB HLTH 150E). These experiences may include, but are not limited to, service-learning projects, senior seminars, or other specialized courses that include: portfolio projects, data analysis, research papers, other written assignments, or honors theses. These cumulative experiences include both written and oral components. Through lectures, readings, course activities and course assignments, students will develop the capacity to apply public health knowledge acquired in core courses to specific public health problems.



**(4) Include handbooks, websites, forms, and other documentation relating to the cumulative experience and field exposure. Provide hyperlinks to documents if they are available online, or include electronic copies of any documents that are not available online.**

- Capstone Description on Major Curriculum website:  
<https://publichealth.berkeley.edu/academics/undergraduate/public-health-ba/curriculum/>
- Honors Thesis website:  
<https://publichealth.berkeley.edu/academics/undergraduate/honors-thesis/>
- Honors Thesis Application form:  
<https://docs.google.com/forms/d/e/1FAIpQLSegg68HPgNG9LbMGRp85nC1FhMTXu0rx03pvBkrtR2UwE5dVw/viewform>

Additional documentation is available in ERF D11.4.

## D12. Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences

The overall undergraduate curriculum and public health major curriculum expose students to concepts and experiences necessary for success in the workplace, further education, and lifelong learning. Students are exposed to concepts through any combination of learning experiences and co-curricular experiences.

- (1) Briefly describe, in the format of Template D12-1, the manner in which the curriculum and co-curricular experiences provide opportunities for exposure to the identified concepts.

Table D12.1.1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences

Concept	Manner in which the curriculum and co-curricular experiences expose students to the concepts
Advocacy for protection and promotion of the public's health at all levels of society	Cal Undergrad Public Health Coalition is a student-run organization focused on networking and advocacy. The <i>Public Health Advocate</i> (UC Berkeley) is an undergraduate publication featuring current public health issues with local, national, and international perspectives. Courses <b>PB HLTH 150E</b> , <b>PB HLTH 150A</b> , <b>PB HLTH 150D</b> , <b>PB HLTH 150B</b> all include as part of the curriculum: lectures, discussion, and oral and written assignments targeting protection and promotion of public health at all levels of society. Examples: screening ( <b>PB HLTH 150A</b> ); safe water ( <b>PB HLTH 150B</b> ).
Community dynamics	<b>PB HLTH 150E</b> : Students are exposed to community dynamics through case studies of community health action in the local Bay Area, nationally and globally.
Critical thinking and creativity	<b>PB HLTH 150A</b> : Students create and design fictitious epidemiologic studies to address a research question regarding their choice (from a list) of exposures and outcomes. They are responsible for all components of the study. They develop a statistical analysis plan and identify surveys or other tools to measure exposures and outcomes. They must critically determine sources of bias, confounding and other limitations. There are both written and oral presentation components.
Cultural contexts in which public health professionals work	<b>PB HLTH 150E</b> : Through written and oral methods, students learn how to organize a successful and culturally respectful community health process and to communicate community health issues to decision makers.
Ethical decision making as related to self and society	<b>PB HLTH 150A</b> : Students learn through a case study, select videos, lecture, homework and discussion, three basic ethical principles related to studying human subjects, informed consent, Belmont report, more. The Tuskegee Syphilis Study is used as one example.
Independent work and a personal work ethic	All classes adhere to the Berkeley Honor Code. This is reviewed in course syllabi.

Concept	Manner in which the curriculum and co-curricular experiences expose students to the concepts
Networking	Students have many opportunities for networking: Orientation for incoming cohorts; <b>PB HLTH 155D</b> Public Health Practice Capstone Course; monthly undergraduate forums; Public Health Alumni Association mixers and events where alumni engage with current students; workshops on branding, interviewing skills, and professionalism sponsored by the RISE Office; Cal Undergrad Public Health Coalition's monthly networking activities (e.g., lunches, dinners, etc) for students, faculty, and alumni.
Organizational dynamics	Students volunteer and are selected to participate on schoolwide faculty committees as representatives of the undergraduate student body. Examples are the Undergraduate Management Committee, Educational Policy and Curriculum Committee, and the Faculty Advisory Committee. Students learn about the organizational dynamics of the school and university and they are voting committee members.
Professionalism	Students have many opportunities to learn professionalism: Assignments in <b>PB HLTH 155D</b> Public Health Practice Capstone Course; Public Health Alumni Association mixers and events where alumni engage with current students; workshops on branding, interviewing skills, and professionalism sponsored by the RISE Office; Cal Undergrad Public Health Coalition's monthly networking activities (e.g., lunches, dinners, etc) for students, faculty, and alumni.
Research methods	<b>PB HLTH 155A</b> Capstone Research Seminar; <b>PB HLTH H195A</b> Honors Thesis. Students learn how to identify a research question; develop specific aims; state a null and alternative hypothesis; identify methods to measure exposure and outcome; create an analytical plan; conduct statistical analysis; and interpret findings and summarize results. Students learn how to write a human subjects study protocol and develop a consent form.
Systems thinking	<b>PB HLTH 150E</b> : Students learn the utility of (and apply) an ecologic model for the conduct of research and practice in public health. Students consider the roles of local and national policy, science, research, and culture representations in exploring the causes of structural inequalities.
Teamwork and leadership	Group project/teamwork is built into the curriculum of all required public health courses ( <b>PB HLTH 150A</b> , <b>PB HLTH 150B</b> , <b>PB HLTH 150D</b> , <b>PB HLTH 150E</b> ) and the peer advisors program that juniors and seniors with solid academic backgrounds and strong leadership skills and/or potential are selected to participate in.

- (2) Provide syllabi for all required coursework for the major and/or courses that relate to the domains listed above. Syllabi should be provided as individual files in the electronic resource file and should reflect the current semester or most recent offering of the course.**

Documentation is available in ERF D12.2.

- (3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Through public health core courses and numerous and extensive community and professional service opportunities (noted in Section F2 in more detail), students are exposed to concepts and experiences necessary for success in the workplace, further education, and lifelong learning.

---

### D13. MPH Program Length

---

**An MPH degree requires at least 42 semester-credits, 56 quarter-credits or the equivalent for completion.**

**Schools and programs use university definitions for credit hours.**

- (1) Provide information about the minimum credit-hour requirements for all MPH degree options. If the university uses a unit of academic credit or an academic term different from the standard semester or quarter, explain the difference and present an equivalency in table or narrative form.**

The School of Public Health offers the professional Public Health Masters (MPH) degree in ten areas of study. Most students in the MPH programs within the school take a two-year course of study. An accelerated 11-month MPH and an On-Campus/Online MPH program are also offered. In conjunction with other programs on campus, the School is able to provide five concurrent degree programs in various concentrations. See table below for available concentration/degree combinations.

The professional two-year MPH program requirements are standard for all areas of study offered within the School of Public Health. Students complete a minimum of 48 units of coursework and public health practice.

The professional 11-month accelerated MPH program differs from the traditional MPH in that applicants for these 11-month programs are generally limited to students with a prior doctoral degree or concurrently enrolled in a doctoral degree program and who have completed undergraduate and graduate work in specific courses outlined by each program. The programs are an intensive, full-time 42-unit course of study running from July to May (11 months).

The On-Campus/Online MPH program offered to working, mid-career professionals allows students in the program to continue working. This area of study requires a minimum of 42 semester units of course work.

**Table D13.1.1 Minimum Unit Requirements for MPH Concentrations**

Minimum unit requirements for MPH concentrations	2 year campus based	Units	Accelerated campus based *	Units	Units
Environmental Health Sciences	MPH	48			
Epidemiology			MPH (11m)	42	
Epidemiology/Biostatistics	MPH	48	MPH (4+1)	42	42
Global Health & Environment	MPH	48			
Health & Social Behavior	MPH	48			
Health Policy & Management	MPH	48	MPH (11m)	42	42
Infectious Diseases & Vaccinology	MPH	48			
Interdisciplinary			MPH (11m)	42	42
Maternal Child & Adolescent Health	MPH	48	MPH (4+1)	42	
			MPH (11m)	42	
Public Health Nutrition	MPH	48	MPH (4+1)	42	42

Notes on Table B13.1.1 Minimum Unit Requirements for MPH Concentrations

\*Two types of accelerated degrees:

"4+ 1" for those who have completed the Undergraduate Public Health BA program at UC Berkeley;

"11 m" - 11-month accelerated degree for a limited number of professionals with at least a master's degree or its equivalent.

\*\*Online MPH (OOMPH) ; Distance based refers to degrees/concentrations that can be earned completely via distance learning or with minimum face-to-face interaction required.

\*\*\*Units reflected are Public Health degree required units combined with the other program which is part of the joint degree (e.g. MBA)

## **(2) Define a credit with regard to classroom/contact hours.**

Credit is measured in semester units at UC Berkeley. As specified by [Academic Senate Regulation](#), one semester unit of academic credit is the equivalent of 15 classroom lecture hours or seminar contact hours. Graduate students cannot earn credit in lower division courses.

---

#### **D14. DrPH Program Length**

---

**The DrPH degree requires a minimum of 36 semester-credits, 48 quarter-credits of post-master's coursework or its equivalent. Credits associated with the integrative learning experience and, if applicable, a residency, internship or other applied practice experience conducted outside of a didactic course, do not count toward this requirement. The minimum credit requirement also does not count MPH-level prerequisite courses or their equivalent.**

**Schools and programs use university definitions for credit hours.**

- (1) Provide information about the minimum credit-hour requirements for all DrPH degree options. If the university uses a unit of academic credit or an academic term different from the standard semester or quarter, explain the difference and present an equivalency in table or narrative form.**

The DrPH program is a full-time campus-based program of study designed to be completed in three or four years for those applicants with an MPH from a CEPH-accredited institution and at least two years of postgraduate professional public health leadership experience. The required course work consists of four full-time semesters (48 units) and a minimum of 12 units of dissertation research credits, for a minimum total of 60 units.

- (2) Define a credit with regard to classroom/contact hours.**

Credit is measured in semester units at UC Berkeley. As specified by [Academic Senate Regulation](#), one semester unit of academic credit is the equivalent of 15 classroom lecture hours or seminar contact hours. The DrPH program requires a minimum of 720 seminar contact hours and an additional 180 hours of dissertation contact hours.

---

## D15. Bachelor's Degree Program Length

---

**A public health bachelor's degree requires completion of a total number of credit units commensurate with other similar degree programs in the university.**

**Schools and programs use university definitions for credit hours.**

- (1) Provide information about the minimum credit-hour requirements for all public health bachelor's degree options. If the university uses a unit of academic credit or an academic term different from the standard semester or quarter, explain the difference and present an equivalency in table or narrative form.**

In order to complete Bachelor of Arts with Public Health as major, students need to complete a minimum of 120 semester units, including 36 upper division units.

The Public Health major curriculum covers 34 upper level units out of the required 36. These units broadly fit within three areas: six required classes (21 units), ten elective units (10 units), and academic work for the required senior capstone (3 units). Senior capstone is an experience that provides opportunities to apply public health principles outside of a typical classroom setting and builds on public health coursework.

Before applying to the Public Health major, students must also complete a minimum of 23 specific lower level units as prerequisites: seven biological science units, one year of math (six to eight units), and three social sciences (11-12 units).

- (2) Define a credit with regard to classroom/contact hours.**

Credit is measured in semester units at UC Berkeley. As specified by [Academic Senate Regulation](#), one semester unit of academic credit is the equivalent of 15 classroom lecture hours or seminar contact hours.

- (3) Describe policies and procedures for acceptance of coursework completed at other institutions, including community colleges.**

Transfer credit is accepted if it falls in line with agreements that other colleges have with UC Berkeley which can be found on the [assist.org](#) website. Usually, only lower-division courses transfer over from community colleges. We honor the agreements set between the CA Community Colleges and UC Berkeley.

If a student has attended another four-year institution, they would contact the appropriate UC Berkeley department to determine equivalency. For example, if they took a math course at four-year college, they would reach out to UC Berkeley's Math department and follow their [equivalency process](#) to ensure they are completing the appropriate prerequisite course equivalent.



**(4) If applicable, provide articulation agreements with community colleges that address acceptance of coursework.**

An example of an articulation agreement accepted is the [Bakersfield College Agreement with UC Berkeley](#) in regards to the Public Health major.

**(5) Provide information about the minimum credit-hour requirements for coursework for the major in at least two similar bachelor's degree programs in the home institution.**

[Bachelor of Arts in Nutritional Sciences](#)

The Department of Nutritional Sciences and Toxicology (NST) offers three undergraduate major program specializations: Physiology and Metabolism, Dietetics, and Toxicology leading to a Bachelor of Science (BS) degree. Similar to the School of Public Health BS degree program, students enroll in this major after completing a series of liberal education requirements and a competitive admissions process.

Students should be ready to declare this major along with their specialization at the end of their sophomore year and the upper division curriculum must be completed within two years of declaring the specialization unless a petition has been approved, same as for the Public Health major. To graduate from this degree program, students complete a minimum of 87 credits, including a minimum of 43 upper-level credits taken from courses focused on nutrition science.

[Bachelor of Arts in Molecular and Cell Biology](#)

The undergraduate major in Molecular and Cell Biology (MCB) focuses on the study of molecular structures and processes of cellular life and their roles in the function, reproduction, and development of living organisms. Students can choose from five emphases (concentrations) in MCB. The major will accept any interested student who meets the minimum course and GPA requirements and is realistically able to complete the major requirements during the student's time at UC Berkeley. Any student intending to major in MCB must finish declaring or complete MCB conditions to declare by the end of their sixth semester, or during the semester before their graduating term.

Similar to the major in Public Health, students must complete a combination of lower level credits (minimum of 40) and upper level credits (minimum depends on the emphasis and ranges from 20 to 22 credits).

## D16. Academic and Highly Specialized Public Health Master's Degrees

Students enrolled in the unit of accreditation's academic and highly specialized public health master's degrees (e.g., MS in biostatistics, MS in industrial hygiene, MS in data analytics, etc.) complete a curriculum that is based on defined competencies; produce an appropriately rigorous discovery-based paper or project at or near the end of the program of study; and engage in research at a level appropriate to the degree program's objectives.

These students also complete coursework and other experiences, outside of the major paper or project, that substantively address scientific and analytic approaches to discovery and/or translation of public health knowledge.

Finally, students complete coursework that provides instruction in the foundational public health knowledge at an appropriate level of complexity. This instruction may be delivered through online, in-person or blended methodologies, but it must meet the following requirements while covering the defined content areas.

The school identifies at least one required assessment activity for each of the foundational public health learning objectives.

The school validates academic public health master's students' foundational public health knowledge through appropriate methods.

(1) List the curricular requirements for each relevant degree in the unit of accreditation.

**Table D16.1.1 Curricular Requirements for MA in Biostatistics**

Course number	Course name	Credits
PB HLTH W200	Foundations of Public Health Practice	1
STAT 201A or STAT 210A	Introduction to Probability at an Advanced Level or Theoretical Statistics	4
STAT 201B or STAT 210B	Introduction to Statistics at an Advanced Level or Theoretical Statistics	4
PB HLTH C240A / STAT C245A	Introduction to Modern Biostatistical Theory and Practice	4
PB HLTH 252D or PB HLTH W252A (online)	Introduction to Causal Inference or Causal Inference for Public Health Professionals	4
PB HLTH 292	Biostatistics MA Thesis Seminar	2
<b>Two of the following:</b>		
PB HLTH C240B / STAT C245B	Biostatistical Methods: Survival Analysis and Causality	4
PB HLTH C240C / STAT C245C	Computational Statistics	4
PB HLTH C240F / STAT C245F	Statistical Genomics	4
PB HLTH 243A/B	Targeted Learning in Big Data	3
PB HLTH 252E	Advanced Topics in Causal Inference	4

Course number	Course name	Credits
PB HLTH 244	Big Data: A Public Health Perspective	3
PB HLTH C242C	Longitudinal Data Analysis	4

**Table D16.1.2 Curricular Requirements for MS in Environmental Health Sciences**

Course number	Course name	Credits
PB HLTH W200	Foundations of Public Health Practice	1
PB HLTH 270	Introduction to Environmental Health Sciences	3
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 270B/NUSCTX 110*	Toxicology I	4
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 299	Independent Research	3+
<b>One of the following:</b>		
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 250B	Epidemiologic Methods II	4
<b>Two of the following:</b>		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 241	Statistical Analysis of Categorical Data	4

\* PB HLTH 270B: Toxicology I is in the process of being redesigned

**Table D16.1.3 Curricular Requirements for MS in Epidemiology**

Course number	Course name	Credits
PB HLTH W200	Foundations of Public Health Practice	1
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 250A or PB HLTH W250	Epidemiologic Methods I	3
PB HLTH 250B or PB HLTH W250B	Epidemiologic Methods II	4
PB HLTH 241 or PB HLTH W241	Intermediate Biostatistics for Public Health	4
PB HLTH 252 or PB HLTH W252	Epidemiological Analysis	4
PB HLTH 271K	Introduction to Data Management and Programming in SAS for Public Health	2

**Table D16.1.4 Curricular Requirements for MS in Global Health and Environment**

Course number	Course name	Credits
PB HLTH W200	Foundations of Public Health Practice	1
PB HLTH 270	Introduction to Environmental Health Sciences	3
PB HLTH 299	Independent Research	3-6
<b>GHE Required Electives (two of the following are required)</b>		
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 270B/NUSCTX 110*	Toxicology I	4
PB HLTH 273	Environmental Determinants of Infectious Disease	3
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 271G	Global Climate Change and Health	3
PB HLTH W272A	Introduction to GIS for Public Health	3
PB HLTH W272C	Applied Spatial Data Science for Public Health	3
<b>Biostatistics and Epidemiology (at least three of the following)</b>		
PB HLTH 250A**	Epidemiology Methods I	3
PB HLTH 142**	Biostatistics – Probability and Statistics	4
PB HLTH 245	Introduction to Multivariate Statistics	4
PB HLTH 250B	Epidemiological Methods II	4
PB HLTH 241	Statistical Analysis of Categorical Data	4
PB HLTH 254	Environmental and Occupational Epidemiology	3

\* PB HLTH 270B: Toxicology I is in the process of being redesigned

\*\* Required, unless exempted

**Table D16.1.5 Curricular Requirements for MS in Health and Medical Sciences**

The UC Berkeley-UCSF Joint Medical Program (JMP) is a five-year graduate/medical degree program (MS/MD). Students spend their pre-clerkship years at UC Berkeley engaging in a unique medical curriculum centered around student-led inquiry while simultaneously earning a master's degree (MS) in the Health and Medical Sciences at UC Berkeley School of Public Health. After two and a half years, students move across the Bay to UCSF to finish their medical education and receive their medical doctorate (MD).

Course number	Course name	Credits
HMS 261A	Master's Seminar (first semester)	4
HMS 261B	Master's Seminar (second semester)	2
HMS 261C	Master's Seminar (third semester)	3
HMS 261D	Master's Seminar (fourth semester)	3
HMS 261E	Master's Seminar (fifth semester)	3
HMS 297	Summer Research Field Study	1+
HMS 296	Practicum	1+
	Epidemiology course	3+
PB HLTH 224E	Health Care Quality	3
PB HLTH 215	Anti-Racist and Racial Justice Praxis	3
	1-2 content or methods electives (2-4 units each course)	3

- (2) Provide a matrix, in the format of Template D16-1, that indicates the required assessment opportunities for each of the defined foundational public health learning objectives (1-12). Typically, the school or program will present a separate matrix for each degree program, but matrices may be combined if requirements are identical.**

**Table D16.2.1 Content Coverage for Academic Public Health Master's Degrees\***

Content	Course	Describe specific assessment opportunity
1. Explain public health history, philosophy, and values	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 1, Topic 1, Questions 1-3
2. Identify the core functions of public health and the 10 Essential Services	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 1, Topic 2, Questions 1-3
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 2, Topic 1, Questions 1-2
4. List major causes and trends of morbidity and mortality in the U.S. or other community relevant to the school or program	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 2, Topic 2, Questions 3-4
5. Discuss the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 3, Topic 1, Questions 1-2
6. Explain the critical importance of evidence in advancing public health knowledge	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 3, Topic 1, Question 3
7. Explain effects of environmental factors on a population's health	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 4, Topic 1, Question 1
8. Explain biological and genetic factors that affect a population's health	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 5, Topic 2, Questions 3-4
9. Explain behavioral and psychological factors that affect a population's health	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 4, Topic 2, Question 2
10. Explain the social, political, and economic determinants of health and how they contribute to population health and health inequities	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 5, Topic 1, Questions 1-2
11. Explain how globalization affects global burdens of disease	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 6, Topic 1, Questions 1-2

Content	Course	Describe specific assessment opportunity
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)	PB HLTH W200: Foundations of Public Health Practice	Quiz: Week 6, Topic 2, Questions 3-4

\*For MS in Health and Medical Sciences, PB HLTH W200 will be required for students who have not previously completed a degree from a CEPH-accredited school of public health, starting with the fall 2023 incoming class.

- (3) Provide a matrix, in the format of Template D16-2, that lists competencies for each relevant degree and concentration. The matrix indicates how each competency is covered in the curriculum. Typically, the school or program will present a separate matrix for each concentration. Note: these competencies are defined by the school or program and are distinct from the foundational public health learning objectives defined in this criterion.

Table D16.3.1 Competencies for MA in Biostatistics

Competency	Describe how this competency is covered
BIO MA C1. Understand the foundations of statistical inference, including probably distributions, translating a health question into a statistical parameter, choose estimation and inferential strategy	<b>STAT 201A or STAT 210A: Introduction to Probability at an Advanced Level or Theoretical Statistics</b> Biweekly homeworks, midterm, and final
	<b>STAT 201B or STAT 210B: Introduction to Statistics at an Advanced Level or Theoretical Statistics</b> Biweekly homeworks, midterm, and final
BIO MA C2. Understand the fundamentals of causal inference, including the process of identification of causal parameters, and the estimation of resulting estimands.	<b>PB HLTH 252D: Introduction to Causal Inference</b> Weekly to biweekly computing labs, assignments, and a final project presentation
BIO MA C3. Have the ability to apply existing estimators in two of four of the following categories: computational statistics (CS), multivariate analysis (MA), generalized linear models (GLM), survival analysis (SA), longitudinal data analysis (LDA), statistical genomics (SG), machine learning (ML).	<b>Two courses required from the following list:</b> <ul style="list-style-type: none"> <li>• PB HLTH C240B / STAT C245B: Biostatistical Methods: Survival Analysis and Causality (SA, LDA, ML) Four assignments, eight labs, and a final project presentation of a data or method</li> <li>• PB HLTH C240C / STAT C245C: Computational Statistics (CS, MA, ML) Biweekly homework/labs with a final project presentation</li> <li>• PB HLTH C240F / STAT C245F: Statistical Genomics (SG, MA) Biweekly homework/labs with a final project presentation</li> <li>• PB HLTH 252E: Advanced Topics in Causal Inference (LDA) Three discussion assignments with formal write-up, nine coding labs, and a final project presentation</li> <li>• PB HLTH 244: Big Data: A Public Health Perspective (CS, ML) Two projects on data (EHR, COVID), one project on computing, and a final project presentation</li> <li>• PB HLTH C242C: Longitudinal Data Analysis (LDA, GLM) Nine labs cover R programming of longitudinal data, graded assignments focus on conceptual/theory material, and a final project presentation</li> </ul>



Competency	Describe how this competency is covered
BIO MA C4. Have fluency in statistical programming languages for both analysis using classic methods, implementation of novel methods, and analyze estimators through simulation.	<b>PB HLTH C240A / STAT C245A: Introduction to Modern Biostatistical Theory and Practice</b> Five coding labs converting theoretical results into estimators
	<b>PB HLTH 252D: Introduction to Causal Inference</b> Six assignments that mix conceptual/theoretical material and coding of estimators, and a final project presentation
BIO MA C5. Have an understanding of the most important theoretical concepts in modern statistical estimation and inference. These include empirical process theory, asymptotic linearity, and efficiency theory.	<b>PB HLTH C240A / STAT C245A: Introduction to Modern Biostatistical Theory and Practice</b> Four assignments and take-home final that covers the entire course, as well as five computation labs that demonstrate the theory by simulation.
BIO MA C6. Effectively communicate research findings, orally and in writing.	<b>PB HLTH 292: Biostatistics MA Thesis Seminar</b> Students must submit drafts of their thesis proposal and thesis as they receive feedback on how to successfully communicate technical material to wider audiences in health sciences.

**Table D16.3.2 Competencies for MS in Environmental Health Sciences**

Competency	Describe how this competency is covered
EHS MS C1. Analyze how the sources and health effects of major environmental and occupational hazards are identified and assessed.	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b> Students present a 15-minute presentation on an environmental or occupational health topic, identifying a problem that needs an environmental health solution or policy that should be implemented, and contextualizing the topic within the larger set of sources and health effects of major environmental and occupational hazards. Students are responsible for developing discussion questions and facilitating class discussions on the topic of the day.
EHS MS C2. Use the principles of exposure science to analyze environmental and occupational exposures	<b>PB HLTH 270A: Exposure Assessment and Control I</b> Students will conduct an in-depth analysis in the field of exposure science that is 10-16 pages long, thoroughly referenced and applies established exposure science principles to an exposure of the student's interest.
EHS MS C3. Identify factors that affect vulnerability of sub-populations to health effects of environmental and occupational exposures.	<b>PB HLTH 220C: Health Risk Assessment</b> Review and characterize risk and vulnerability assignment: students present (10 minutes) on who is most exposed to the chemical; exposure considerations specific to the chemical for various populations, including children; specific susceptible populations; uncertainty factors that authoritative entities use and rationale for doing so; degree of variation in assessment approach by authoritative bodies; and specific risk assessment steps taken to identify and protect susceptible subpopulations. Group members self-assess their contributions to group work.
EHS MS C4. Use risk assessment and other methods to assess environmental health hazards and identify mitigative measures.	<b>PB HLTH 220C: Health Risk Assessment</b> A final project is presented in a small group. Teams of approximately three students will develop a 30-minute presentation on a risk assessment topic assigned in the first weeks of class. Each team prepares a presentation on the disease burden associated with their assigned chemical, employing and evaluating the four major components of risk assessment for the chemical—hazard identification, dose-response assessment, exposure assessment, and risk characterization. Group members self-assess their contributions to group work, and peer-assess contributions to the final presentation and semester-long project.
EHS MS C5. Conduct research on an environmental health or occupational health problem and synthesize information to make recommendations.	<b>PB HLTH 299: Independent Research</b> Students work directly with a faculty mentor, enrolling in PB HLTH 299 with that faculty member, in order to conduct mentored research on an environmental health or occupational health problem. In the final spring semester of the program, a 15-20 page, thoroughly referenced thesis is submitted and critiqued by the faculty member, and students present their research findings in a poster presentation, including: 1) motivation for the research question; 2) data sources; 3) analytical methods; and 4) results and discussion.

**Table D16.3.3 Competencies for MS in Epidemiology**

Competency	Describe how this competency is covered
EPI MS C1. Demonstrate methodological expertise for epidemiological research in choosing appropriate study designs, in calculating and interpreting measures of disease and association, in identifying and addressing sources of bias in studies, in estimating and interpreting confounding and effect measure modification, and in applying causal frameworks to the assessment of causality in associations.	<b>PB HLTH 250B: Epidemiologic Methods II</b> Students demonstrate these competencies through calculation, short answer, and multiple choice questions on three midterms, and weekly problem sets.
	<b>PB HLTH W250B: Epidemiologic Methods II</b> Students demonstrate these competencies through calculation, short answer, and multiple choice questions on two exams, six quizzes, and six journal club assignments.
	<b>PB HLTH 252 / W252: Epidemiological Analysis</b> Over a series of six lab assignments (focused on analysis of epidemiologic data) and two exams, students are asked to choose and implement the appropriate analytical method to estimate various epidemiologic measures of association based on different study designs, and interpret the estimates calculated using teaching datasets designed to mimic real-world data. They are asked to present their findings in clear graphical and tabular format, and provide written interpretations of results consistent with format used in published articles.
EPI MS C2. Collaborate with both investigators and statistical colleagues in the analysis of data from biomedical and public health studies applying knowledge of summary evidence using systematic review or meta-analysis.	<b>Capstone Paper</b> Students select from three capstone paper options: systematic review, formal meta-analysis, or an article describing the results of original epidemiologic research that includes secondary data analysis conducted by the student. Each student is paired with a faculty mentor who works closely with them to develop an analytic plan and to ensure that appropriate statistical methods are considered and used. Students are also paired with peer mentors to discuss stats methods and concepts. Formal assessments of this engagement happen through two faculty. Each option requires students to collaborate with their peers and statistics professors to ensure appropriate methods are applied. Papers are assessed and critiqued by both students and professors.

Competency	Describe how this competency is covered
EPI MS C3. Implement methods of data management and cleaning for epidemiologic data sets, including using SAS and/or R.	<p><b>PB HLTH 241 / W241: Intermediate Biostatistics for Public Health</b></p> <p>In this course we emphasize developing analytic skills for both continuous and binary outcomes. The course has a strong emphasis on application. Over a series of 16 labs and 15 problem sets, we include techniques for data cleaning and management. The students are also required to develop an original research question in a small (two to four student) group, and complete an analysis that demonstrates their application of the skills from the course. All exercises are presented in the “tidyverse” series of packages for R. Skills emphasized include: handling missing values and skip patterns; eliminating duplicate values; recoding variables from character to numeric; creating categorical variables; renaming, sorting, and filtering datasets; and reshaping data from long to wide formats or wide to long formats.</p>
	<p><b>PB HLTH W251: R for Public Health</b></p> <p>This course emphasizes multidisciplinary, collaborative, and “real world” uses of R. On the exam, students are provided a dataset that must be imported, manipulated, and analyzed using R, and pushed into a class git repository. Students also complete six graded “milestones” as part of a structured group project, including: Milestone 1: set up git repository; Milestone 2: import data into R and identify key data elements and their data type; Milestone 3: clean dataset with descriptive statistics; Milestone 4: visualizations; Milestone 5: complete draft; Milestone 6: final presentation.</p>
	<p><b>PB HLTH 271K: Introduction to Data Management and Programming in SAS for Public Health</b></p> <p>Over a series of weekly labs, four homework packets, a midterm, and a final, students demonstrate the ability to clean and manage public health data in SAS. Students are provided “dirty” datasets and data dictionaries and asked to find the answers to specific questions which require them to manage, clean, and manipulate the data to obtain the correct answers. The midterm assesses importing data from different formats, saving and exporting data, cleaning nonsensical and misspelled character data, managing missing numerical data, identifying and removing duplicate rows, characterizing continuous numerical variables, making indicator variables for data cleaning, working with SAS dates, generating new variables using data from two or more original variables, extracting portions of a string variable, applying formats and labels, and generating and interpreting univariate statistics and frequency tables. The final exam is cumulative and additionally assesses data subsetting, stacking and merging, long data manipulation (cumulating and lagging), long-to-wide and wide-to-long data transformation, simple arrays, simple macros, graphing and plotting, and basic statistics (correlations, t-test) and regressions (linear and logistic).</p>

Competency	Describe how this competency is covered
EPI MS C4. Recognize and conduct appropriate regression analysis techniques to analyze data from medical and other public health studies.	<p><b>PB HLTH 241 / W241: Intermediate Biostatistics for Public Health</b></p> <p>This course covers primarily the use of ANOVA/ANCOVA, linear regression, and logistic regression analysis methods. Included in this course are examples and exercises using both real and simulated data to demonstrate the impact of modeling choices. We approach data analysis with regression primarily for the objective of causal inference, though we also discuss predictive modeling and empiric approaches. Within the context of the models covered, students are asked to assess the validity of the model assumptions, generate and interpret model fit statistics. Students must specify a formal causal model and the link to the observed data in order to estimate a measure of effect. Choices of covariates, inclusion of interaction and higher order terms are considered. The data project for the course requires development of a formal statistical analysis plan.</p>
	<p><b>PB HLTH 252 / W252: Epidemiological Analysis</b></p> <p>In a series of six analytical assignments based on the teaching dataset from the Framingham Study, and other datasets, students are asked to estimate odds ratios, risk ratios/differences, incidence rate ratios/differences, hazard ratios, and time ratios (and corresponding confidence intervals) from generalized linear models, parametric and semiparametric proportional hazards models, and accelerated failure time models. Students must identify which model specification (e.g., combination of distribution and link function) is used to estimate the necessary measure of association, and how to incorporate study design features (e.g., matching) into the analysis when necessary. Students are asked to apply generalized linear models to estimate standardized measures of association. Students are required to specify and calculate the necessary estimands for effect measure modification and interaction based on parameters from a regression model, and how to conduct appropriate statistical tests for the presence of each.</p>
EPI MS C5. Interpret study findings including critically identifying strengths and limitations of individual studies.	<p><b>PB HLTH 250A: Epidemiologic Methods I</b></p> <p>On the Final Exam (30% of course score), students read and complete a detailed, structured critique of three epidemiological papers from the scientific literature. Students are asked to provide an appropriate interpretation of epidemiologic results (including statistical tests) given the study design, assess random and systematic error, consider and describe alternative plausible and ethical study designs, and discuss the strengths and limitations of the methodological approach.</p>

Competency	Describe how this competency is covered
	<p><b>PB HLTH W250: Epidemiologic Methods I</b></p> <p>On the Midterm (15%) and Final Exam (25%) students are given excerpts from published studies and asked to interpret results (including statistical tests). They are tested about appropriate study design selection (strengths and limitations) and asked to identify sources of error (both random and systematic). These skills are further reinforced in four problem sets (40% of grade) throughout the term and in four journal club assignments where they apply these skills to full-length published articles.</p>
	<p><b>PB HLTH 250B: Epidemiologic Methods II</b></p> <p>In lecture, problem sets and exams, interpretation of study findings from the published literature and from hypothetical study scenarios is assessed. Identification of strengths and limitations of the individual studies from the published literature and from hypothetical study scenarios is also assessed.</p>
	<p><b>PB HLTH W250B: Epidemiologic Methods II</b></p> <p>In group journal club discussion sections and assignments, class concepts are linked to published articles. Students also demonstrate their capacity to assess the strengths and limitations of real published studies on exams and quizzes.</p>
	<p><b>PB HLTH 292: MPH Seminar</b></p> <p>The course is designed to provide students an opportunity to apply, interpret, and discuss epidemiologic methods and statistical analysis approaches through an independent research paper. All students are required to conduct a review of their topic and incorporate the findings into their paper. Students selecting to do a systematic review or meta-analysis will use established guidelines to conduct their review. Students work closely with faculty to complete a data analysis plan and in interpreting study findings. Specific sessions will provide opportunities for students to apply epidemiologic methods through individual and group activities.</p>
EPI MS C6. List and explain the core principles underlying the ethics of human research (ie autonomy/respect for person; justice; beneficence; and non-maleficence).	<p><b>Capstone Paper</b></p> <p>Students are required to actively engage with ethical considerations as part of their capstone research paper. Students have to be critical and assess the ethical considerations of their research, provide the steps for how they address each consideration, and be formally evaluated with regards to whether they pass the capstone paper and/or oral exam tied to their research.</p>

**Table D16.3.4 Competencies for MS in Global Health and Environment**

Competency	Describe how this competency is covered
GHE MS C1. Analyze how the sources and health effects of major environmental and occupational hazards are identified and assessed.	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b> Students present a 15-minute presentation on an environmental or occupational health topic, identifying a problem that needs an environmental health solution or policy that should be implemented, and contextualizing the topic within the larger set of sources and health effects of major environmental and occupational hazards. Students are responsible for developing discussion questions and facilitating class discussions on the topic of the day.
GHE MS C2. Use the principles of exposure science to characterize and understand environmental exposures in low- and middle-income countries.	<b>PB HLTH 270A: Exposure Assessment and Control I</b> Through multiple weekly problem sets, students will apply principles of exposure science to problems explicitly relevant to LMIC contexts.
GHE MS C3. Propose environmental health policies or regulations for their impact on global population health.	<b>PB HLTH 270: Introduction to Environmental Health Sciences</b> Students prepare a six- to eight-page technical or policy brief on a global environmental or occupational health topic among the many covered in the course. The goal of the brief is to identify and assess a global environmental or occupational health problem of significance, and analyze policies or regulations that would be appropriate for addressing the issue. Students demonstrate an understanding of the major factors that contribute to the global environmental or occupational health problem they have identified. Students will translate the scientific evidence on their topic for policy and make it understandable to policy- and decision-makers.
GHE MS C4. Use an environmental justice lens to analyze disparities in exposures to environmental contaminants	<b>PB HLTH 270A: Exposure Assessment and Control I</b> Students complete a problem set focused on estimating disparities in exposure, and understanding the role of race and racism in their perpetuation.
GHE MS C5. Conduct research on an environmental health or occupational health problem and synthesize information to make recommendations.	<b>PB HLTH 299: Independent Research</b> Students work directly with a faculty mentor, enrolling in PB HLTH 299 with that faculty member, in order to conduct mentored research on an environmental health or occupational health problem. In the final spring semester of the program, a 15-20 page, thoroughly referenced thesis is submitted and critiqued by the faculty member, and students present their research findings in a poster presentation, including: 1) motivation for the research question; 2) data sources; 3) analytical methods; and 4) results and discussion.

**Table D16.3.5 Competencies for MS in Health and Medical Sciences**

Competency	Describe how this competency is covered
JMP HMS MS C1. Demonstrate ability to engage in advanced scholarship related to public health/health equity with an antiracist lens.	HMS261A. Students receive individualized support in the writing of their thesis from both their committee members and the faculty of the HMS261 course series. This course frames the study of medicine through a critical lens.
JMP HMS MS C2. Demonstrate appropriate level of scholarly writing, including discussion of methods.	HMS261A, HMS261B, HMS261C, HMS261D, HMS261E. Students receive individualized support in the writing of their thesis from both their committee members and the faculty of the HMS261 course series.
JMP HMS MS C3. Apply understanding of principles of research ethics through IRB application process and adherence to research principles in data collection, management and analysis, and in dissemination.	Students receive training in the ethical conduct of human subjects research and in the writing of short grant applications as part of the HMS261 course series.
JMP HMS MS C4. Describe the impact of racism on health using a structural, interpersonal and individualized lens.	Material covered across the curriculum, specifically in PH215; HMS261C, HMS261D, HMS261E.
JMP HMS MS C5. Apply principles of public health, including health policy, epidemiology, systems thinking and systems improvement in analyzing and addressing health inequities.	Concepts covered in the Master's Seminar series, specifically HMS261C, HMS261D, HMS261E. Also addressed in Health Quality PH224E.



**(4) Briefly explain how the school or program ensures that the instruction and assessment in basic public health knowledge is generally equivalent to the instruction and assessment typically associated with a three-semester-credit course.**

PB HLTH W200: Foundations of Public Health Practice is an online course that covers the 12 Foundational Public Health Learning Objectives. PB HLTH W200 is required for all academic master's students who have not previously completed a degree from a CEPH-accredited school of public health. Over 13 weeks, students are required to view lectures, assigned videos, and online activities; complete all required readings; fully participate in group assignments; take weekly quizzes; and participate in two discussion forums each week. The course also includes a final discussion and final exam.

Enhancements to the course are in progress and will be available to students taking the course starting in July 2023. The revised course will include faculty interview videos for each of the learning objective modules, featuring how faculty have incorporated the learning objectives into their research. There will also be readings recommended by each faculty profiled in the videos. Students will also write reflection papers for each module, as well as utilize a research planning workbook to connect learning objectives to their research. The course enhancements are intended to provide an opportunity for students to learn about faculty research across programs within UC Berkeley School of Public Health and identify possible faculty mentors for their research projects.

Students have the option of taking the course for credit or not for credit. The not for credit option, which includes a certificate of completion for student records, is offered so that students do not have to pay if they take the course during the summer before matriculation or the summer after their first year.

- (5) Identify required coursework and other experiences that address the variety of public health research methods employed in the context of a population health framework to foster discovery and/or translation of public health knowledge and a brief narrative that explains how the instruction and assessment is equivalent to that typically associated with a three-semester-credit course. Typically, the school or program will present a separate list and explanation for each degree program, but these may be combined if requirements are identical.**

PB HLTH W200: Foundations of Public Health Practice is required for all academic master's students who have not previously completed a degree from a CEPH-accredited school of public health. The course addresses quantitative and qualitative methods employed in the context of a population health framework. Examples of additional courses that cover public health research methods include:

Biostatistics

PB HLTH C240A / STAT C245A: Introduction to Modern Biostatistical Theory and Practice (4 units)

Environmental Health Sciences

PB HLTH 270: Introduction to Environmental Health Sciences (3 units)

Epidemiology

PB HLTH 250A / W250: Epidemiologic Methods I (3 units)

PB HLTH 250B / W250B: Epidemiologic Methods II (4 units)

PB HLTH 252 / W252: Epidemiological Analysis (4 units)

Global Health and Environment

PB HLTH 270: Introduction to Environmental Health Sciences (3 units)

Health and Medical Sciences

Content or Methods Elective Requirement (2-4 units each course)

- (6) Include the most recent syllabus for any course listed in the documentation requests above, or written guidelines for any required elements that do not have a syllabus. If the syllabus does not contain a specific, detailed set of instructions for the assessment activity listed in Templates D16-1 or D16-2, provide additional documentation of the assessment, e.g., sample quiz question, full instructions for project, prompt for written discussion post, etc.**

Syllabi are available in ERF D16.6.

- (7) Briefly summarize policies and procedures relating to production and assessment of the final research project or paper.**

Academic master's students complete their final research project in accordance with policies established by the UC Berkeley Graduate Division, and may be a Master's Thesis (Plan I) or Comprehensive Final Examination or Final Project (Plan II). The options available to students for each degree are summarized below. For master's students under Plan I, UC Berkeley specifies the process for preparing the thesis. For master's students under Plan II, each program decides the content and format of the capstone element (either a comprehensive final examination or a capstone project), which should cover the knowledge and skills reasonably expected of a master's degree recipient in the field.

#### Biostatistics

Early in the fall semester of the second year, students will receive a questionnaire asking them whether they are planning to complete the Plan I (thesis) or Plan II (comprehensive exam). Students must choose either Plan I or Plan II by December 1 of their second year. All students who choose the master's thesis option (Plan I) must register for two units of independent study/research credits with their thesis committee chair for the spring semester. Thesis committee membership consists of three or four faculty members, with two inside members from the graduate group in Biostatistics and one member from "outside" the department (e.g., Epidemiology, Bioengineering, etc.). If an outside member cannot be identified, a third member from the group in Biostatistics is permissible. The committee chair must be an "inside" member (from within the group in Biostatistics). The MA comprehensive examination (Plan II) includes a written deliverable and 90-minute oral exam, and is designed to test a candidate's breadth and depth of knowledge and understanding of material from the curriculum, as well as the ability to articulate and explain basic concepts. Candidates are to view the examination not as a presentation (i.e., no handouts, notes, or PowerPoint material will be allowed) but rather as a discovery-based opportunity to demonstrate to examiners that they possess an understanding of the topics under discussion. The focus should be on concepts rather than mathematics and should include examples and applications. The comprehensive examination committee will be identified by student services staff, and consists of two faculty members from the graduate group in Biostatistics.

#### Environmental Health Sciences

Master's students in EHS pursue Plan II, allowing students to complete a final project. Students are encouraged to enroll in PB HLTH 299: Independent Study/Research units in order to help support them in writing their thesis. The final project is an original project, such as a systematic literature review or a research paper, that demonstrates knowledge and skills reasonably expected of a master's degree recipient in environmental health. Masters Plan II projects do not require a thesis committee.

#### Epidemiology

Each student in the Epidemiology master's program is required to submit a written paper by a given deadline early in the spring semester and to present/defend that paper. The defense of the paper in the

spring semester in the presence of two or more faculty is designed to meet the requirement of the Graduate Division and the School of Public Health for an oral examination. Students can elect to write one of the three types of papers addressing an epidemiological topic: 1) A systematic review, 2) A formal meta-analysis, or 3) An article describing the results of original epidemiologic research that includes secondary data analysis conducted by the student. Students will present their masters papers to their peers and at least one faculty member during the spring seminar (PB HLTH 292).

#### Global Health and Environment

Master's students in GHE pursue Plan II, allowing students to complete a final project. Students are encouraged to enroll in PB HLTH 299: Independent Study/Research units in order to help support them in writing their thesis. The final project is an original project, such as a systematic literature review or a research paper, that demonstrates knowledge and skills reasonably expected of a master's degree recipient in environmental health. Masters Plan II projects do not require a thesis committee.

#### Health and Medical Sciences

Although the HMS MS program offers the option of a thesis for the MS degree (Plan I), students are strongly advised to opt for the Plan II pathway because it is a flexible format suitable to the professional nature of the MD by accommodating a broad range of scholarship. To ensure consistent quality and scope of master's projects, a written proposal for the capstone project must be approved by the program's executive committee prior to the beginning of the project. The written document describing the student's master project is evaluated by the project mentor, the second project advisor, and an additional faculty member of the HMS graduate group not directly participating in the student's project during the last semester. At least two of these assessors are from UC Berkeley and one of them is senate faculty at UC Berkeley or UCSF. The project mentor and secondary advisor must first approve the version to be submitted to the third member of the evaluation group. Completion of the master's project with a satisfactory evaluation is a requirement to obtain the MS degree and to transfer to UCSF to complete the MD component of the combined JMP training.

Under Plan II, JMP students work on individual master's projects, which are developed throughout most of the 2.5 years of the master's curriculum (after completing basic requirements for engaging with human subjects research in their first semester). The project should align with the JMP's mission and vision and must constitute a substantial contribution to the academic field through research (i.e., creation of new knowledge) and/or a contribution to communities as a result of organizing, advocacy, or service work (i.e., application of existing knowledge with the possibility of creating new knowledge). A well-developed project should 1) examine or address a significant issue or set of issues affecting the health and well-being of people/communities through an anti-racism and changemaker lens; 2) focus on a specific topic or set of highly related topics while also tying together each student's learning from multiple courses; 3) draw upon sound methodological principles; 4) provide the current state of knowledge from the existing literature on the subject matter; 5) present compelling findings based on appropriate analytical frameworks; and 6) reflect on how the project contributes to the JMP vision. The scope of the project should, at the outset, have the potential to be reportable in a scholarly journal in the field.

Evaluation standards for the final written product under Plan I and Plan II include the following:

- Appropriate methods: the student must have effectively applied the selected methods.
- Significant results: the student should have achieved the proposed goals and the work should address a gap in current understanding and, when possible, add consequentially to the field and/or open additional areas for further exploration.

- Effective presentation: the student should use a suitable style and organization to present the master's project work with clarity and integrity during the annual JMP symposium. The student should also plan to use appropriate forums for communicating the work to its intended audiences (e.g., regional or national conferences).
- Reflective critique: the student should critically evaluate the master's project work, including bringing an appropriate breadth of evidence to the critique.

**(8) Provide links to handbooks or webpages that contain the full list of policies and procedures governing production and assessment of the final research project or paper for each degree program.**

UC Berkeley policies and procedures are linked here:

- [UC Berkeley Graduate Policies](#)
- [UC Berkeley Graduate Division Thesis Writing and Filing Guide](#)

Documents by degree program are available in ERF 16.8.

**(9) Include completed, graded samples of deliverables associated with the major paper or project. The school or program must provide at least 10% of the number produced in the last three years or five examples, whichever is greater.**

Samples are available in ERF D16.9.

**(10) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Our MA program in Biostatistics and MS program in EHS, Epidemiology, Global Health and Environment, and Health and Medical Sciences (UCB-UCSF Joint Medical Program) are some of the best specialized Public Health Master's degree programs in the nation. For example, the MS in Health and Medical Sciences, as part of the UCB-UCSF Joint Medical Program, aims to train the next generation of physician leaders who are equipped to not only provide excellent patient care, but fight for health equity and social justice by virtue of their structured master's curriculum at Berkeley. Students pursuing academic master's degrees at UC Berkeley School of Public Health complete a curriculum based on defined mission and related competencies and produce a final project that demonstrates knowledge and skills appropriate for a master's degree recipient in the field. In recent years, we've made significant progress in diversifying the student body of these highly specialized master degree programs. No significant weaknesses noted in any of the programs.

---

## D17. Academic Public Health Doctoral Degrees

---

Students enrolled in the unit of accreditation's doctoral degree programs that are designed to prepare public health researchers and scholars (e.g., PhD, ScD) complete a curriculum that is based on defined competencies; engage in research appropriate to the degree program; and produce an appropriately advanced research project at or near the end of the program of study.

These students also complete coursework and other experiences, outside of the major paper or project, that substantively address scientific and analytic approaches to discovery and translation of public health knowledge.

These students complete doctoral-level, advanced coursework and other experiences that distinguish the school of study from a master's degree in the same field.

The school defines appropriate policies for advancement to candidacy, within the context of the institution.

Finally, students complete coursework that provides instruction in the foundational public health knowledge at an appropriate level of complexity. This instruction may be delivered through online, in-person or blended methodologies, but it must meet the following requirements while covering the defined content areas.

The school identifies at least one required assessment activity for each of the foundational public health learning objectives.

The school validates academic doctoral students' foundational public health knowledge through appropriate methods.

- (1) List the curricular requirements for each non-DrPH public health doctoral degree in the unit of accreditation, **EXCLUDING** requirements associated with the final research project. The list must indicate (using shading) each required curricular element that a) is designed expressly for doctoral, rather than master's, students or b) would not typically be associated with completion of a master's degree in the same area of study. The school or program may present accompanying narrative to provide context and information that aids reviewers' understanding of the ways in which doctoral study is distinguished from master's-level study. This narrative is especially important for institutions that do not formally distinguish master's-level courses from doctoral-level courses. The school or program will present a separate list for each degree program and concentration as appropriate.

Curricular requirements designed expressly for doctoral students or not typically associated with completion of a master's degree in the same area of study are highlighted in the D17.1 tables.

If a student has already completed master's level courses in the discipline before entering their PhD program, they would be expected to work with their faculty advisor to identify appropriate upper division courses to complete that would replace the units for any required course or their equivalent already taken. Depending on the PhD concentration, the minimum number of didactic credits required if a student enters with a master's degree in the same discipline is between seven and 18 credits.

**Table D17.1.1 Curricular Requirements for PhD in Biostatistics**

Course number	Course name	Credits
PB HLTH W200*	Foundations of Public Health Practice	1
<b>One of the following:</b>		
PB HLTH 210A	Theoretical Statistics	4
PB HLTH 210B	Theoretical Statistics	4
<b>One of the following:</b>		
PB HLTH C240A / STAT C245A	Intro to Modern Biostatistical Theory and Practice	4
PB HLTH C240B / STAT C245B	Biostat Methods Survival Analysis and Causality	4
<b>One of the following:</b>		
PB HLTH 252D	Introduction to Causal Inference	4
PB HLTH W252A	Introduction to Causal Inference	4
PB HLTH 252E	Advanced Topics in Causal Inference	4

\*Required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health

**Table D17.1.2 Curricular Requirements for PhD in Environmental Health Sciences**

Course number	Course name	Credits
PB HLTH W200*	Foundations of Public Health Practice	1
PB HLTH 270A	Exposure Assessment and Control	3
PB HLTH 250B	Epidemiologic Methods II	4
PB HLTH 241	Statistical Analysis of Categorical Data	4
PB HLTH 270B/NUSCTX 110**	Toxicology I	4
PB HLTH 220C	Health Risk Assessment	3
PB HLTH 271E	Science and Policy for Environmental Health	3
PB HLTH 293	EHS Doctoral Seminar	1-4
PB HLTH 299	Independent Research	3+
<b>At least one of the following:</b>		
PB HLTH 254	Occupational and Environmental Epidemiology	3
PB HLTH 267B	Characterization of Airborne Contaminants	4
PB HLTH W272C	Applied Spatial Data Science for Public Health	3

\*Required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health

\*\*PB HLTH 270B: Toxicology I is in the process of being redesigned



**Table D17.1.3 Curricular Requirements for PhD in Epidemiology\***

Course number	Course name	Credits
PB HLTH W200**	Foundations of Public Health Practice	1
PB HLTH 250A or PB HLTH W250	Epidemiologic Methods I	3
PB HLTH 250B or PB HLTH W250B	Epidemiologic Methods II	3
PB HLTH 250C	Advanced Epidemiologic Methods	4
PB HLTH 252 or PB HLTH W252	Epidemiological Analysis	4
PB HLTH 252D	Causal Inference I	4
PB HLTH 249	Grant Writing Seminar	2
PB HLTH 293	Epidemiology Doctoral Seminar (1st Semester)	2
PB HLTH 293	Epidemiology Doctoral Seminar (2nd Semester)	2

\*If a student has already completed core courses (PB HLTH 250A, 250B, 252) before entering the program, they would be expected to replace those units with other upper division courses like those included in the recommended courses list of the [Epidemiology PhD Student Handbook](#)

\*\*Required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health

**Table D17.1.4 Curricular Requirements for PhD in Health Policy**

Course number	Course name	Credits
PB HLTH W200*	Foundations of Public Health Practice	1
PB HLTH 237E	Doctoral Seminar in Health Organizations and Management	2
PB HLTH 237F	Doctoral Seminar in Health Economics	2
PB HLTH 237C	Health Policy Research Colloquium	1
PB HLTH 237D	Health Policy Dissertation Seminar	1
<b>CHOOSE ONE SPECIALITY FIELD:</b> <b>A. Health Economics, B. Organizations &amp; Management, or C. Population &amp; Data Science</b>		
<b>A. Health Economics Speciality Field Requirements</b>		
ECON 201A	Economic Theory	4
	<i>four specialty field electives</i>	
	<i>three quantitative research methods courses</i>	
	<i>three additional electives</i>	
<b>B. Organizations &amp; Management Speciality Field Requirements</b>		
PB HLTH 224D	Organizational Analysis of the Health Sector	3
	<i>four specialty field electives, with one macro-organizational and one micro-organizational course</i>	
	<i>three quantitative research methods courses</i>	
	<i>three additional electives</i>	
<b>C. Population &amp; Data Science Speciality Field Requirements</b>		
	<i>five specialty field electives</i>	
	<i>six additional electives</i>	

\*Required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health

**Table D17.1.5 Curricular Requirements for PhD in Infectious Diseases and Immunity**

Course number	Course name	Credits
PB HLTH W200*	Foundations of Public Health Practice	1
PB HLTH 260A	Principles of Infectious Disease	4
<b>Group I: Infectious Diseases (PB HLTH 260A and one of the following)</b>		
PB HLTH 262	Molecular Basis of Bacterial Pathogenesis	3
PB HLTH 265	Molecular Parasitology	3
PB HLTH 266B	Zoonotic Diseases	2
<b>Group II: Immunology (one of the following)</b>		
PB HLTH 263	Public Health Immunology	3
MCB 250	Advanced Immunology	4
<b>Group III: Biostatistics (one of the following)</b>		
PB HLTH 142	Introduction to Probability and Statistics in Biology	4
PB HLTH 245	Introduction to Multivariate Statistics	4
<b>Group IV: Epidemiology (one of the following)</b>		
PB HLTH 250A	Epidemiologic Methods I	3
PB HLTH 253B**	Epidemiology and Control of Infectious Diseases	3
PB HLTH 260E	Molecular Epidemiology	2
<b>Group V: Research</b>		
PB HLTH 293***	IDI Doctoral Seminar	1
PB HLTH 293****	Doctoral Research Seminar	2

\*Required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health

\*\* IDI PhD students without an epidemiology background are strongly encouraged to read more about Epidemiology and/or take 250A prior to taking 253B

\*\*\* Required every semester

\*\*\*\* For pre-QE students in letter grade, other IDI students are welcome

- (2) Provide a matrix, in the format of Template D17-1, that indicates the required assessment opportunities for each of the defined foundational public health learning objectives (1-12). Typically, the school or program will present a separate matrix for each degree program, but matrices may be combined if requirements are identical.**

**Table D17.2.1 Content Coverage for Academic Doctoral Degree in a Public Health Field**

Content	Course	Describe specific assessment opportunity
1. Explain public health history, philosophy, and values	PHW200: Foundations of Public Health Practice	Quiz: Week 1, Topic 1, Questions 1-3
2. Identify the core functions of public health and the 10 Essential Services	PHW200: Foundations of Public Health Practice	Quiz: Week 1, Topic 2, Questions 1-3
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PHW200: Foundations of Public Health Practice	Quiz: Week 2, Topic 1, Questions 1-2
4. List major causes and trends of morbidity and mortality in the U.S. or other community relevant to the school or program	PHW200: Foundations of Public Health Practice	Quiz: Week 2, Topic 2, Questions 3-4
5. Discuss the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.	PHW200: Foundations of Public Health Practice	Quiz: Week 3, Topic 1, Questions 1-2
6. Explain the critical importance of evidence in advancing public health knowledge	PHW200: Foundations of Public Health Practice	Quiz: Week 3, Topic 1, Question 3
7. Explain effects of environmental factors on a population's health	PHW200: Foundations of Public Health Practice	Quiz: Week 4, Topic 1, Question 1
8. Explain biological and genetic factors that affect a population's health	PHW200: Foundations of Public Health Practice	Quiz: Week 5, Topic 2, Questions 3-4
9. Explain behavioral and psychological factors that affect a population's health	PHW200: Foundations of Public Health Practice	Quiz: Week 4, Topic 2, Question 2
10. Explain the social, political, and economic determinants of health and how they contribute to population health and health inequities	PHW200: Foundations of Public Health Practice	Quiz: Week 5, Topic 1, Questions 1-2
11. Explain how globalization affects global burdens of disease	PHW200: Foundations of Public Health Practice	Quiz: Week 6, Topic 1, Questions 1-2
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., One Health)	PHW200: Foundations of Public Health Practice	Quiz: Week 6, Topic 2, Questions 3-4

- (3) Provide a matrix, in the format of Template D17-2, that lists competencies for each relevant degree and concentration. The matrix indicates how each competency is covered in the curriculum. Typically, the school or program will present a separate matrix for each concentration. Note: these competencies are defined by the school or program and are distinct from the introductory public health learning objectives defined in this criterion.**

**Table 17.3.1 Competencies for PhD in Biostatistics**

Competency	Describe how this competency is covered
BIOSTAT PHD C1. Develop basic competence in statistical theory.	Grade of B- or above in STAT210A: Theoretical Statistics or equivalent.
BIOSTAT PHD C2. Ability to apply knowledge of statistical theory to justify choice of statistical inference procedures for data problems commonly found in public health and biomedical applications.	Grade of B- or above in PB HLTH C240A: Introduction to Modern Biostatistical Theory and Practice, or PB HLTH C240B: Biostat Methods Survival Analysis and Causality.
BIOSTAT PHD C3. Evaluate an area of biostatistical methodology and, if warranted, propose and develop new statistical inference methods in that area.	Qualifying exams.
BIOSTAT PHD C4. Have fluency in statistical programming languages for both creating and evaluating via simulations new or existing statistical methodology.	Dissertation, qualifying exam.
BIOSTAT PHD C5. Have the ability to apply the fundamentals of causal inference for specific health data problems, , including the defining the causal parameter of interest, determining identification of the causal parameter, and the estimation of resulting estimands in realistic statistical models.	Grade of B- or above in PB HLTH 252D / W252A: Introduction to Causal Inference, PB HLTH 252E: Advanced Topics in Causal Inference, or equivalent causal inference course. Evaluated as part of qualifying exam and dissertation review.

Competency	Describe how this competency is covered
<p>BIOSTAT PHD C6. Be able to place scientific questions in rigorous statistical framework:</p> <p>a. Understand and have the ability to apply methods and list assumptions for identifying statistical estimands that address scientific question(s) of interest.</p> <p>b. Be able to either develop estimators for above, or to recognize when such estimands have been developed and have the ability to apply them.</p> <p>c. Have working knowledge of computational methods and programming languages that can be used to implement or evaluate novel methods.</p>	<p>Grade of B- or above in PB HLTH C240A: Introduction to Modern Biostatistical Theory and Practice, or PB HLTH C240B: Biostat Methods Survival Analysis and Causality.</p>
<p>BIOSTAT PHD C7. Effectively communicate advanced statistical methods, assessing their strengths and limitations and where to place the methods in the Statistical/Causal Roadmap.</p>	<p>Qualifying exam, dissertation, and presentations in optional seminar courses.</p>

**Table 17.3.2 Competencies for PhD in Environmental Health Sciences**

Competency	Describe how this competency is covered
EHS PHD C1. Apply advanced methodology to research projects in environmental health sciences and develop new approaches to address environmental health problems.	<p><b>PB HLTH 299: Research Units</b></p> <p>Research units are required in every semester. Under the guidance of a faculty mentor students will learn and apply advanced quantitative methods to answer questions in environmental health. Typically a student will take three research credits in the first year, three to six in the second year and closer to 12 units after they advance to candidacy.</p>
EHS PHD C2. Develop and demonstrate written and oral communications skills by preparing papers, summaries, briefings and presentations regarding environmental health science.	<p><b>PB HLTH 293: EHS Doctoral Seminar</b></p> <p>Students prepare and deliver a 30-60 minute presentation on their areas of specialization within the environmental health sciences, and receive feedback from their peers and seminar faculty both orally during class, and one-on-one with faculty outside of class sessions.</p>
EHS PHD C3. Clarify critical gaps in scientific knowledge that impede the resolution of environmental health problems and plan original research that will lead to solutions of such problems.	<p><b>Preliminary Oral Exam for Dissertation:</b> The Preliminary Graduate Group exam is an oral exam that requires a research prospectus written in the format of an NIH grant proposal. Based on the prospectus, students are assessed on the breadth and depth of their knowledge across the wide field of EHS, including relevant areas of exposure assessment, toxicology, risk assessment, environmental health policy, basic statistical methods, and environmental epidemiology.</p>
EHS PHD C4. Conceive, develop and conduct original research leading to useful applications in environmental health sciences, toxicology, environmental health policy or industrial hygiene.	<p><b>Dissertation:</b> EHS dissertations must make a contribution to existing knowledge and be an original piece of scholarship that applies advanced methods in exposure assessment, toxicology, or epidemiology to study an open question in the field.</p>
EHS PHD C5. Understand advanced analytic methods in environmental health science.	<p>Students will be required to take 12 units of course work tailored to their interests and research. They will consult with their advisor to identify the best courses. For example, they may take PB HLTH 254: Environmental and Occupational Epidemiology, PB HLTH 267B: Characterization of Airborne Contaminants, or PB HLTH W272C: Applied Spatial Data Science for Public Health.</p> <p><b>PB HLTH 254: Occupational and Environmental Epidemiology</b></p> <p>In a seminar style format, students refine their ability to identify specific sources of potential bias by applying a systemic review format to critique studies selected from the occupational and environmental epidemiologic literature. Students are evaluated on the basis of four written, standardized critiques submitted over the course of the semester, and a final project consisting of an oral assessment of the epidemiologic evidence for the health effect of a</p>

Competency	Describe how this competency is covered
	<p>selected occupational or environmental hazard. They are evaluated on identifying the study objective, study design and population, details of the exposure assessment, outcome assessment, statistical methods, effect modification, drawing DAGs for bias assessment, confounding and methods of control, information bias, and selection bias. For the bias section, they are additionally evaluated on their ability to estimate the magnitude and direction of bias in the study.</p>
	<p><b>PB HLTH 267B: Characterization of Airborne Contaminants</b>  267B probes the scientific principles underlying the sampling and analysis of airborne particles and gasses, including chemicals and bioaerosols. Both environmental and occupational settings are discussed, as well as the different approaches, assumptions, and methods used for each. Students learn the techniques used to sample for gasses, vapors, and particles and how to estimate their airborne concentrations under various conditions. The course focuses on the characteristics of particles, the aerodynamics of their movement in air and the importance of particle size for evaluating health effects, sampling, and controlling particles. Through three projects students work in small groups (two to four students/group) to design sampling to address questions about real occupational or environmental exposures, then prepare the equipment and conduct the sampling, perform appropriate calculations, and finally write a report that analyzes the collected data and presents the results in context to evaluate the implications of these results for the health of the community or the workers affected. Each project is progressively more challenging and requires more independent thinking; the final project is one devised and conducted by the students themselves, and is presented orally to the class in addition to the written report. In addition to the projects, which comprise nearly half the grade, students are evaluated on the problem sets, a midterm exam, and class participation.</p>
	<p><b>PB HLTH W272C: Applied Spatial Data Science for Public Health</b>  Students work individually using real-world datasets to learn spatial analysis methods, including spatial interpolation, cluster and point pattern analysis, and spatial regression. Environmental agents such as air pollution, water contaminants, and pesticides are analyzed using spatial techniques. Building on methods learnt in class, the students complete a final project which entails the use of multiple spatial techniques and the presentation in a journal manuscript-style write-up, which is reviewed and commented on by peers prior to final review by the instructor.</p>



**Table 17.3.3 Competencies for PhD in Epidemiology**

Competency	Describe how this competency is covered
EPI PHD C1. Independently identify study questions that will advance scientific knowledge about a topic of public health significance.	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>The final assignment is to write a NIH-style grant application (R21 or F31). When working on the sections related to the hypotheses/specific aims and background/significance, students are required to conduct a critical review of the literature to identify the gaps in knowledge and how to address these gaps, which forms the premises of their research questions. This is an independent process with guidance from the instructor and small students' groups that are assigned during the class to provide constructive feedback.</p>
	<p><b>PB HLTH 293 Doctoral Seminar</b></p> <p>Each doctoral student is required to present their doctoral research, including the study questions or aims, at least once per semester. This can be in presentation format or in written format (e.g., a dissertation chapter).</p>
EPI PHD C2. Use appropriate statistical methods, including multivariate models, to analyze data from epidemiologic studies using cross-sectional, case-control, or cohort designs.	<p><b>PB HLTH 252/PB HLTH W252 Epidemiological Analysis</b></p> <p>In a series of six analytical assignments based on the teaching dataset from the Framingham Study, and other datasets, students are asked to estimate odds ratios, risk ratios/differences, incidence rate ratios/differences, hazard ratios, and time ratios (and corresponding confidence intervals) from generalized linear models, parametric and semiparametric proportional hazards models, and accelerated failure time models. Students must identify which model specification (e.g., combination of distribution and link function) is used to estimate the necessary measure of association, and how to incorporate study design features (e.g., matching) into the analysis when necessary. Students are asked to apply generalized linear models to estimate standardized measures of association. Students are required to specify and calculate the necessary estimands for effect measure modification and interaction based on parameters from a regression model, and how to conduct appropriate statistical tests for the presence of each.</p>
EPI PHD C3. Critically review scientific manuscripts and research proposals.	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>The final assignment is to write a NIH-style grant (R21 or F31). When working on the sections related to the hypotheses/specific aims and background/significance, students are required to conduct a critical review of the literature to identify the gaps in knowledge and how to address these gaps, which forms the premises of their research questions. Students also participate in a mock NIH review section, and critically review their peer's proposals by giving written constructive feedback using the NIH template for reviewers and by presenting/discussing the proposals during mock review.</p>
	<p><b>PB HLTH 293 Doctoral Seminar</b></p> <p>All class members provide constructive criticism of other students' presentations and writing (dissertation chapters, manuscripts, pre-doctoral grant proposals) throughout the semester.</p>

Competency	Describe how this competency is covered
	<p><b>Qualifying Examination</b></p> <p>The purpose of the qualifying examination (QE) is to assess the adequacy of a student's preparation to conduct dissertation research in epidemiology. All Epidemiology PhD students will be examined and be required to demonstrate competence in epidemiology, biostatistics, and a "third area" of the student's choosing. The "third area" is typically chosen so as to be relevant to the student's proposed dissertation research. The qualifying examination is intended to assess the breadth and depth of the student's knowledge with regard to the history, theory, concepts, and real-world application of epidemiology, biostatistics, and the specified third area.</p>
<p>EPI PHD C4. Independently design and implement epidemiologic studies, incorporating principles of causal inference and addressing sources of bias and methods to improve the validity of epidemiologic studies.</p>	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>The final assignment is to write a NIH-like grant (R21 or F31). When working on the section related to the methods, students must select the relevant study design to test their hypotheses, and describe each element of their approach (study population, data collection, sample size/statistical power/statistical analyses, strengths/limitations of their approaches in terms of sources bias/validity, and alternatives).</p>
	<p><b>PB HLTH 250C Advanced Epidemiologic Methods</b></p> <p>Students complete a series of six data analysis assignments, using R, which include problems involving Bayesian inference, missing data methods, quantitative bias analysis, instrumental variables analysis, and causal mediation analysis applied to various epidemiologic study designs. On the final exam, students are required to justify and outline an analysis plan using at least one of the techniques covered during the semester, to gauge their ability to apply the techniques outside of the classroom setting.</p>

Competency	Describe how this competency is covered
<p>EPI PHD C5. Develop a research proposal that states a study question, presents a scientific and public health rationale for its significance and specifies a detailed methodology for carrying out an epidemiologic study to answer the question.</p>	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>The objective of this course is to write a NIH-style grant application that includes specific aims and all components of the research strategy.</p> <p><b>Prospectus</b></p> <p>Through his/her prospectus, the student is expected to demonstrate convincingly that he/she possesses the following skills, which are defined in a document provided to all students who are preparing for the qualifying examination: 1) conceptual; 2) problem solving; 3) critical/creative; and 4) writing. Once the prospectus has been certified by the adviser, the student may proceed to schedule and take the oral qualifying examination (OQE). Once the oral qualifying examination has been scheduled, it is advisable to also schedule the discussion of the prospectus.</p> <p>Conceptual: This refers to the student's ability to review a body of extant literature relevant to the research problem and to provide a coherent synthesis from which a research question and design can be formulated. The specific elements of this skill will be evaluated on the ability to: a) review the literature and its ramifications; b) develop a theoretical framework that is useful for the identification of the relevant research question(s); and c) select one or more such research questions to be expanded upon and to provide a rationale for the choice.</p> <p>Problem Solving: This refers to the student's ability to develop the following for the selected research questions: a) a proposal for an appropriate study that meets established ethical standards for human research; follows criteria for valid study design; and balances issues of theoretical optimization with those of feasibility; b) sufficient detail to permit a judgment on its methodological adequacy; and c) a detailed plan for the appropriate analysis and interpretation of the resulting data.</p> <p>Critical/Creative: This involves a discussion of hypothetical outcomes of the proposed study design, their likely interpretation, and their significance. Interpretation includes limitations of the proposed design and the relationship of the expected findings to the extant body of knowledge in the chosen research area (e.g., issues left unresolved, future research that follows from the proposed work).</p> <p>Writing Skills: This refers to the ability to communicate epidemiologic, biostatistical, and other relevant concepts clearly and cogently. The use of proper, grammatically correct English will be expected.</p> <p>Abstract: Students are expected to be able to provide a succinct overview of the research question, the rationale for the study, and</p>

Competency	Describe how this competency is covered
	<p>generally comment on the design and expected results and implications.</p> <p>Background: This section should provide a literature review that synthesizes and critiques the current knowledge base for the topic. The section should set the framework for the rationale that appears in the next section.</p> <p>Statement of the Research Question: This section should provide a clear statement of the research questions and hypotheses. The section should include a rationale that explicitly links the proposed research to the review contained in the previous section. When appropriate, a directed acyclic graph should be included.</p>
EPI PHD C6. Design study management, data collection, and data management protocols.	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>The final assignment is to write a NIH-like grant (R21 or F31). When working on the section related to the methods, students must describe how data will be collected, curated, and securely stored. NIH data sharing policies are also presented, but a data sharing plan is not required in their final grant applications.</p> <p><b>Prospectus</b></p> <p>Design and Analysis Plan: Students may or may not identify an actual study population or data resource (if the study is a secondary analysis of an extant data resource). If the student does not identify an actual study population, they should identify and justify the characteristics of a desirable and feasible study population (or data resource) in the context of the design that is being proposed. The size of the study population being proposed should be fully justified, using power curves or other appropriate supporting materials.</p> <p>The selection of an overall study design should be justified in light of the specifics of the research and in terms of other options that might be theoretically possible but not necessarily feasible or desirable. Details concerning data collection and management in the context of the study design should be included.</p> <p>Analysis Plan: A detailed data analysis plan must be presented in the context of the research proposal. Issues such as the specification of the primary outcome, primary exposure(s), and important covariates should be addressed. Choice of effect measures and the methods to obtain them should be justified, as should the choice of analytic approaches.</p> <p>The statistical analysis plan should include the simplest set of tools necessary to estimate and provide inference for the relevant parameters suggested by the study's aims. This plan typically should include: 1) the data structure implied by the design of the study (e.g., right-censored outcome with time-independent covariates); 2) the</p>

Competency	Describe how this competency is covered
	<p>parameter(s) of interest (e.g., the unadjusted and adjusted associations of a particular binary risk factor with a continuous outcome—such as the association of outcome and risk factor within strata of potential cofounders; 3) types of graphs that could be used to display data that are relevant to the estimation of those parameters (e.g., scatter plot of outcome vs. risk factor if the outcome is continuous); 4) the method used to estimate the parameters (e.g., simple linear regression, Cox regression, etc.); and 5) the method used to derive statistical inference for those estimates (e.g., simple Wald statistic, bootstrapping, robust SE's from GEE, etc.).</p> <p>Additional material, such as types of diagnostic plots or tests, model fitting procedures, etc., should be included when relevant. Examples of actual models (e.g., <math>Y=b_0+b_1X+b_2Z+e</math>) with reference to the parameter of interest (e.g., <math>b_1</math>) are encouraged.</p>
EPI PHD C7. Communicate the results of such studies orally and in writing in such a way that non-epidemiologically trained practitioners or the general public can understand their applicability.	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>Students NIH write the narrative of their grant applications in lay language. They are also encouraged to include activities related to research translation in the approach of their grants.</p>
EPI PHD C8. Present oral and written reports on such studies that satisfy the criteria for sound science.	<p><b>PB HLTH 249 Grant Writing Seminar</b></p> <p>Students are asked to orally present their specific aims and rationale to the class. At the end of the class, they also participate in a mock NIH review section, and critically review their peer's proposals by giving written constructive feedback using the NIH template for reviewers and by orally presenting/discussing the proposals during mock review.</p>

Competency	Describe how this competency is covered
	<p><b>Prospectus Discussion</b></p> <p>Once the student has passed the OQE, the student must have a discussion of the prospectus with all members of the committee and formally establish a dissertation committee by advancing to doctoral candidacy through the Graduate Division (via the Higher Degrees eForm process similar to the QE). This discussion needs to occur within 90 days after the OQE. The prospectus will be distributed to the dissertation committee at least three weeks before the scheduled date of the discussion of the prospectus. Committee members will have read the prospectus before the discussion. The committee members will discuss the research plan for the dissertation with the student, resolve any differences of opinion on approach amongst the committee members and the student, and decide on any changes to the research plan that are necessary. The discussion will be scheduled for a two-hour period. The committee can decide whether to request an opportunity to review the prospectus again after the changes have been implemented by the student. Once the committee agrees that the prospectus is acceptable they will need to sign off on the Discussion of Prospectus form and submit it to the Epidemiology/Biostatistics program manager. Once the form is submitted, the student can advance to candidacy and commence work on the dissertation.</p>
	<p><b>Presentation of Dissertation Research</b></p> <p>Doctoral students are expected to present their research plans and progress/results periodically in the epidemiology doctoral seminar PH 293.16. While the Graduate Division does not require a public thesis defense, all doctoral students are expected to present the findings of their dissertation research in a scheduled seminar during the semester. Two venues are available: PH293 and the annual Epidemiology retreat early every calendar year.</p>

**Table 17.3.4 Competencies for PhD in Health Policy, Health Economics specialty field**

Competency	Describe how this competency is covered
HP PHD HE C1. Apply health economics theoretical and conceptual models relevant to health policy and health services research	Students are required to take five courses (of at least three units each) from a list of approved economics courses; this must include PhD-level microeconomics, and students consult with their advisors on the remaining choices. This competency is further developed through writing the dissertation prospectus and the dissertation, both of which involve an extended process of refinement with advisors.
HP PHD HE C2. Pose relevant and important research questions for health policy and health services research	The required core Health Policy doctoral seminars PB HLTH 237E and PB HLTH 237F both include development of seven- to 10-page detailed written research proposals. This competency is further developed through writing the dissertation prospectus and the dissertation, both of which involve an extended process of refinement with advisors.
HP PHD HE C3. Demonstrate proficiency in the application of appropriate analytical techniques to evaluate health policy and health services research questions	Students are required to take three courses from a list of approved methods courses, selected in consultation with their advisors. They also must write a methods paper, working with their advisor or the methods paper advisor to refine it for approval prior to their qualifying examination.
HP PHD HE C4. Effectively communicate findings and implications of health policy and health services research through multiple modalities to scientific peers and other stakeholders	The required core Health Policy doctoral seminars PB HLTH 237E and PB HLTH 237F both require students to prepare written summaries and lead oral discussion of assigned readings. Students are also required to orally present their work-in-progress to their peers in the Dissertation Seminar (PH237D) each semester after passing their specialty field exam; refining the written dissertation is simultaneously achieved through an extended process of refinement with advisors.

**Table 17.3.5 Competencies for PhD in Health Policy, Organizations & Management specialty field**

Competency	Describe how this competency is covered
HP PHD OM C1. Apply organizations and management theoretical and conceptual models relevant to health policy and health services research	Students are required to take five courses (of at least three units each) from a list of approved organizations and management courses; this must include PB HLTH 224D (Organizational Analysis of the Health Sector), and students consult with their advisors on the remaining choices. This competency is further developed through writing the dissertation prospectus and the dissertation, both of which involve an extended process of refinement with advisors.
HP PHD OM C2. Pose relevant and important research questions for health policy and health services research	The required core Health Policy doctoral seminars PB HLTH 237E and PB HLTH 237F both include development of seven- to 10-page detailed written research proposals. This competency is further developed through writing the dissertation prospectus and the dissertation, both of which involve an extended process of refinement with advisors.
HP PHD OM C3. Demonstrate proficiency in the application of appropriate analytical techniques to evaluate health policy and health services research questions	Students are required to take three courses from a list of approved methods courses, selected in consultation with their advisors. They also must write a methods paper, working with their advisor or the methods paper advisor to refine it for approval prior to their qualifying exam.
HP PHD OM C4. Effectively communicate findings and implications of health policy and health services research through multiple modalities to scientific peers and other stakeholders	The required core Health Policy doctoral seminars PB HLTH 237E and PB HLTH 237F both require students to prepare written summaries and lead oral discussion of assigned readings. Students are also required to orally present their work-in-progress to their peers in the Dissertation Seminar (PH237D) each semester after passing their specialty field exam; refining the written dissertation is simultaneously achieved through an extended process of refinement with advisors.



**Table 17.3.6 Competencies for PhD in Health Policy, Population & Data Science specialty field**

Competency	Describe how this competency is covered
HP PHD PDS C1. Apply population and data science theoretical and conceptual models relevant to health policy and health services research	Students are required to take five courses (of at least three units each) from a list of approved population and data science courses; advisors must approve the list to ensure that together they provide strong doctoral-level training in population and data science that includes appropriate theoretical and conceptual content. This competency is further developed through writing the dissertation prospectus and the dissertation, both of which involve an extended process of refinement with advisors.
HP PHD PDS C2. Pose relevant and important research questions for health policy and health services research	The required core Health Policy doctoral seminars PB HLTH 237E and PB HLTH 237F both include development of seven-to-10 page detailed written research proposals. This competency is further developed through writing the dissertation prospectus and the dissertation, both of which involve an extended process of refinement with advisors.
HP PHD PDS C3. Demonstrate proficiency in the application of appropriate analytical techniques to evaluate health policy and health services research questions	Students are required to take three courses from a list of approved methods courses, selected in consultation with their advisors. They also must write a methods paper, working with their advisor or the methods paper advisor to refine it for approval prior to their qualifying examination.
HP PHD PDS C4. Effectively communicate findings and implications of health policy and health services research through multiple modalities to scientific peers and other stakeholders	The required core Health Policy doctoral seminars PB HLTH 237E and PB HLTH 237F both require students to prepare written summaries and lead oral discussion of assigned readings. Students are also required to orally present their work-in-progress to their peers in the Dissertation Seminar (PH237D) each semester after passing their specialty field exam; refining the written dissertation is simultaneously achieved through an extended process of refinement with advisors.

**Table 17.3.7 Competencies for PhD in Infectious Diseases and Immunity**

Competency	Describe how this competency is covered
<p>IDI PHD C1. Describe viral, bacterial, fungal, and parasitological agents of infectious diseases of humans; explain biological, molecular, cellular and immunological mechanisms of infection and disease; and demonstrate advanced knowledge of molecular biology, microbiology, immunology, biochemistry and cell biology.</p>	<p>Students are required to take 2 courses in Group I: Infectious Disease. Course options include:  <b>PB HLTH 260A Principles of Infectious Diseases (4 units)</b>            And one of the following:  <b>PB HLTH 262 Molecular Basis of Bacterial Pathogenesis (3 units)</b>  <b>PB HLTH 265 Molecular Parasitology (3 units)</b>  <b>PB HLTH 266B Zoonotic Diseases (2 units)</b></p> <p>Students are required to take 1 course in Group II: Immunology. Course options include:  <b>PB HLTH 263 Public Health Immunology (3 units)</b>  <b>MCB 250 Advanced Immunology (4 units)</b></p> <p>In addition to the required courses listed above, students will select several additional courses appropriate to the student's area of research interest with the guidance of the graduate advisor and other faculty. It is expected that students will complete a minimum of 30 units of predominantly graduate-level courses, in addition to four units of graduate seminar.</p>
<p>IDI PHD C2. Understand various epidemiologic analytical study designs to address infectious disease occurrence and distributions in human populations.</p>	<p>Students are required to take one course in Group IV: Epidemiology. Course options include:  <b>PB HLTH 250A Epidemiologic Methods I (4 units)</b>  <b>PB HLTH 253B Epidemiology and Control of Infectious Diseases (3 units)</b>  <b>PB HLTH 260E Molecular Epidemiology (2 units)</b></p> <p>IDI PhD students without an epidemiology background are strongly encouraged to read more about epidemiology and/or take 250A prior to taking PH 253B.</p> <p>In addition to the required courses listed above, students will select several additional courses appropriate to the student's area of research interest with the guidance of the graduate advisor and other faculty. It is expected that students will complete a minimum of 30 units of predominantly graduate-level courses, in addition to four units of graduate seminar.</p>

Competency	Describe how this competency is covered
<p>IDI PHD C3. Increase our understanding of infectious diseases and immunology through basic and translational research that contributes to developing new diagnostics, treatments, and methods to prevent or control diseases.</p>	<p>Students are required to take 2 courses in Group I: Infectious Disease. Course options include:  <b>PB HLTH 260A Principles of Infectious Diseases (4 units)</b>            And one of the following:  <b>PB HLTH 262 Molecular Basis of Bacterial Pathogenesis (3 units)</b>  <b>PB HLTH 265 Molecular Parasitology (3 units)</b>  <b>PB HLTH 266B Zoonotic Diseases (2 units)</b></p> <p>Students are required to take 1 course in Group II: Immunology. Course options include:  <b>PB HLTH 263 Public Health Immunology (3 units)</b>  <b>MCB 250 Advanced Immunology (4 units)</b></p> <p>In addition to the required courses listed above, students will elect several additional courses appropriate to the student's area of research interest with the guidance of the graduate advisor and other faculty. It is expected that students will complete a minimum of 30 units of predominantly graduate-level courses, in addition to four units of graduate seminar.</p>
<p>IDI PHD C4. Apply statistical methods appropriately to analyze laboratory and/or epidemiological data.</p>	<p>Students are required to take one course in Group III: Biostatistics.</p> <p>Course options include:  <b>PB HLTH 142 Introduction to Probability &amp; Statistics (4 units)</b>  <b>PB HLTH 245 Introduction to Multivariate Statistics (4 units)</b></p>
<p>IDI PHD C5. Develop a research proposal that states a study question, presents a scientific and public health rationale for its significance and specifies a detailed methodology for carrying out the research project.</p>	<p>Students are required to take two courses in Group V: Research:  <b>PH 293 IDI Monday Doctoral Seminar (1 unit)</b> required every semester  <b>PH 293 IDI Research Doctoral Seminar (2 units)</b> for pre-QE students in letter grade, other IDI students are welcome</p> <p><b>PB HLTH 293: IDI Doctoral Seminar</b>            In the PB HLTH 293 Doctoral Seminar during the first and second years of the program, IDI students write an NSF- and/or NIH-style grant application that includes specific aims and the research strategy. They also learn how proposals are evaluated at both NSF and NIH and often partake in a mock study section.</p> <p>In preparation for the qualifying exam, second-year students develop two research proposals, described below, with guidance from the professor instructing the PB HLTH 293 Doctoral Seminar and feedback from fellow doctoral students in the seminar, as well as guidance from the QE chair and the student's dissertation advisor. This evaluates the students' skills in the following areas: conceptual; problem-solving; critical/creative; and writing ability.</p> <p>1) A 10-15 page written proposal describing the proposed dissertation</p>

Competency	Describe how this competency is covered
	<p>project. Written in the form of a grant proposal, including abstract, background and significance, aims and experimental plans, this document explicitly discusses an experimental approach that would lead to a new level of understanding, solve a current problem, or resolve a longstanding issue in a field. The proposal must be approved by the exam committee chair, typically after several drafts, and the final version is circulated to the entire committee prior to the exam.</p> <p>2) A ~10-page written proposal on an outside topic. The purpose of the outside proposal is to ensure scientific breadth by demonstrating that students have competency in an area unrelated to their research proposal. The topic of the outside proposal will be approved by the dissertation committee chair to ensure that the proposal is sufficiently distinct from the thesis research.</p>
<p>IDI PHD C6. Organize, analyze and present scientific data in a lucid manner through oral communications.</p>	<p>Students are required to take two courses in Group V: Research:  <b>PH 293 IDI Monday Doctoral Seminar (1 unit)</b> required every semester  <b>PH 293 IDI Research Doctoral Seminar (2 units)</b> for pre-QE students in letter grade, other IDI students are welcome</p> <p><b>PB HLTH 293: IDI Doctoral Seminar</b>  In the PB HLTH 293 Doctoral Seminar, first-year IDI students practice their final presentations for each of their three laboratory rotations and second-year students practice their QE dissertation (“Inside”) and Outside presentations (no slides). All receive feedback from the professor teaching the doctoral seminar and fellow doctoral students on their ability to organize and present scientific data in a lucid manner.</p> <p><b>Qualifying Examination</b>  During the qualifying examination, an approximately three-hour oral examination, the student presents and defends the two written proposals, and is frequently interrupted to probe details, explore the background and theory of the proposed research, and lay out the rationale for the proposed methods of data analysis. A typical examination lasts approximately three hours, with about two hours spent on the thesis (Inside) proposal and about one hour spent on the Outside proposal. Upon completion of the exam, the chair of the QE committee writes a report describing the student’s performance and any areas of weakness with recommendations for strategies for improvement, which is relayed both to the IDI program head and to the student’s dissertation advisor.</p> <p><b>Thesis Committee Meetings</b>  At least once per year, IDI students convene their dissertation committee for a formal meeting and discussion of progress. Students prepare and deliver a presentation that includes their dissertation rationale, relevant background, aims, and research progress in the past</p>

Competency	Describe how this competency is covered
	<p>year in relation to previous goals. They also note any obstacles encountered and how they have/will be overcome, provide an outline of plans for the upcoming year, and outline their longer-term goals and provide a timeline for the remainder of the dissertation. They answer questions from the dissertation committee (consisting of their chair and three faculty from the IDI program and fields related to their dissertation topic).</p> <p><b>PB HLTH 293 IDI Seminar Series and Dissertation Finishing Talk</b>  IDI Students present in the IDI Research Seminar Series (a required fall and spring course during their entire tenure in the IDI program), where doctoral students, postdoctoral fellows, and faculty from the IDI program—as well as invited outside speakers—present their research in the area of infectious disease pathogenesis, immunology, and epidemiology. They present a research-in-progress seminar and a finishing talk at the completion of their dissertation.</p> <p><b>Annual Retreat</b>  Every year, the IDI Program holds a retreat where all doctoral students present updates on their research in a chalk-talk format and answer questions and receive feedback from IDI program faculty and students.</p>
IDI PHD C7. Design, conduct, and publish original research in the area of infectious diseases and immunity.	<p><b>Dissertation:</b> IDI students demonstrate their ability to design, conduct, and write up original research in the form of their dissertation, which is reviewed by their dissertation chair and all members of their dissertation committee before being filed as part of the requirements for completion of their PhD. In addition, each student must publish original scientific papers describing their original research in the area of infectious diseases and immunity.</p>

**(4) Briefly explain how the school or program ensures that the instruction and assessment in introductory public health knowledge is generally equivalent to the instruction and assessment typically associated with a three semester-credit course.**

PB HLTH W200: Foundations of Public Health Practice is an online course that covers the 12 Foundational Public Health Learning Objectives. PB HLTH W200 is required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health. Over 13 weeks, students are required to view lectures, assigned videos, and online activities; complete all required readings; fully participate in group assignments; take weekly quizzes; and participate in two discussion forums each week. The course also includes a final discussion and final exam.

Enhancements to the course are in progress and will be available to students taking the course starting in July 2023. The revised course will include faculty interview videos for each of the learning objective modules featuring how faculty have incorporated the learning objectives into their research. There will also be readings recommended by each faculty profiled in the videos. Students will also write reflection papers for each module, as well as utilize a research planning workbook to connect learning objectives to their research. The course enhancements are intended to provide an opportunity for students to learn about faculty research across programs within the school and identify possible faculty mentors for their research projects.

Students have the option of taking the course for credit or not for credit. The not-for-credit option, which includes a certificate of completion for student records, is offered so that students do not have to pay if they take the course during the summer before matriculation or the summer after their first year.

**(5) Identify required coursework and other experiences that address the variety of public health research methods employed in the context of a population health framework to foster discovery and translation of public health knowledge and a brief narrative that explains how the instruction and assessment is equivalent to that typically associated with a three-semester-credit course. Typically, the school or program will present a separate list and explanation for each degree program, but these may be combined if requirements are identical.**

PB HLTH W200: Foundations of Public Health Practice is required for all PhD students who have not previously completed a degree from a CEPH-accredited school of public health. The course addresses quantitative and qualitative methods employed in the context of a population health framework. Examples of additional courses that cover public health research methods include:

Biostatistics

PB HLTH C240A: Introduction to Modern Biostatistical Theory and Practice (4 units)

PB HLTH C240B: Biostat Methods Survival Analysis and Causality (4 units)

PB HLTH 252D / PB HLTH W252A: Introduction to Causal Inference (4 units)

PB HLTH 252E: Advanced Topics in Causal Inference (4 units)

Environmental Health Sciences

PB HLTH 250B: Epidemiologic Methods II (4 units)

PB HLTH 241: Statistical Analysis of Categorical Data (4 units)

### Epidemiology

PB HLTH 250A / W250: Epidemiologic Methods I (3 units)

PB HLTH 250B / W250B: Epidemiologic Methods II (4 units)

PB HLTH 250C: Advanced Epidemiologic Methods (4 units)

PB HLTH 252 / W252: Epidemiological Analysis (4 units)

### Health Policy

Health Economics Specialty Field Requirements: three Quantitative research methods courses

Organizations and Management Specialty Field Requirements: three Quantitative research methods courses

Population and Data Science Specialty Field Requirements: five specialty field electives

### Infectious Diseases and Immunity

Group III: Biostatistics requirement

- PB HLTH 142: Introduction to Probability and Statistics in Biology (4 units)
- PB HLTH 245: Introduction to Multivariate Statistics (4 units)

Group IV: Epidemiology requirement

- PB HLTH 250A: Epidemiologic Methods I (3 units)
- PB HLTH 253B: Epidemiology and Control of Infectious Diseases (3 units)
- PB HLTH 260E: Molecular Epidemiology (2 units)

- (6) Include the most recent syllabus for any course listed in the documentation requests above, or written guidelines for any required elements that do not have a syllabus. If the syllabus does not contain a specific, detailed set of instructions for the assessment activity in Templates D17-1 or D17-2, provide additional documentation of the assessment, e.g., sample quiz question, full instructions for project, prompt for written discussion post, etc.**

Syllabi are available in ERF D17.9.

- (7) Briefly summarize policies and procedures relating to production and assessment of the final research project or paper.**

The doctoral degree is awarded in recognition of a student's knowledge of a broad field of learning and for distinguished accomplishment in that field through an original contribution of significant knowledge and ideas. To be eligible to receive the doctorate, the student must complete at least two years (four semesters) of academic residence, pass a qualifying examination administered by a committee approved by the UC Berkeley Graduate Division on behalf of the UC Berkeley Graduate Council, and submit an approved dissertation completed under the guidance of UC Berkeley Academic Senate faculty members. PhD students at UC Berkeley School of Public Health fall under the guidelines of Graduate Division Dissertation Plan B which stipulate that a committee of at least three UC Berkeley Academic Senate members will guide the research and judge the merits of the dissertation. Dissertations must also meet requirements determined by the Division within UC Berkeley School of Public Health administering the doctoral degree.

**(8) Provide links to handbooks or webpages that contain the full list of policies and procedures governing production and assessment of the final research project or paper for each degree program.**

UC Berkeley policies and procedures are linked here:

- [UC Berkeley Graduate Policies](#)
- [UC Berkeley Configuration Requirements for Higher Degree Committees](#)
- [UC Berkeley Graduate Division Dissertation Writing and Filing Guide](#)

Documents by degree program are available in ERF 17.8.

**(9) Include completed, graded samples of deliverables associated with the advanced research project. The school or program must provide at least 10% of the number produced in the last three years or five examples, whichever is greater.**

Samples are available in ERF D17.9.

**(10) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: These programs are the crown jewel of UC Berkeley School of Public Health. They consistently rank among the top PhD programs in the nation. Students pursuing academic doctoral degrees at UC Berkeley School of Public Health complete a curriculum based on defined competencies, engage in research that substantively addresses scientific and analytical approaches to discovery and translation of public health knowledge, and produce a dissertation that demonstrates original contribution of significant knowledge and ideas in their field. Post-graduation outcome data show nearly all PhD graduates engaged in postdoctoral research or obtaining research or applied practice positions in public health within a year of graduation. No significant weaknesses observed.

---

**D18. All Remaining Degrees**

---

Not applicable.



---

## **D19. Distance Education**

---

**The university provides needed support for the school, including administrative, communication, information technology and student services.**

**There is an ongoing effort to evaluate the academic effectiveness of the format, to assess learning methods and to systematically use this information to stimulate school improvements. Evaluation of student outcomes and of the learning model are especially important in institutions that offer distance learning but do not offer a comparable in-residence school.**

- (1) Identify all public health distance education degree programs and/or concentrations that offer a curriculum or course of study that can be obtained via distance education.**

**Template Intro-1 may be referenced for this purpose.**

The Online Professional Master of Public Health program is available in an interdisciplinary program format and as an online modality for MPH concentrations in Health Policy and Management, Epidemiology and Biostatistics, and Public Health Nutrition.

- (2) Describe the public health distance education programs, including the following:**

- (a) an explanation of the model or methods used**
- (b) the school or program's rationale for offering these programs**
- (c) the manner in which the school or program provides necessary administrative, information technology, and student support services**
- (d) the manner in which the school or program monitors the academic rigor of the programs and their equivalence (or comparability) to other degree programs offered by the university**
- (e) the manner in which the school or program evaluates the educational outcomes, as well as the format and methods**

**a) Model or Methods used**

The Online Professional Master of Public Health program uses a hybrid model of mostly online instruction with two visits to the Berkeley campus totaling 15 days or approximately 15% of the instructional curriculum. The on-campus sessions provide opportunities for online students to meet their online cohort face to face, other on-campus students in Public Health, faculty including those who do not teach in the program, and to engage in coursework less conducive to online pedagogy that can be better facilitated by the campus setting (e.g., negotiations). Activities on campus also include a student led research/practice colloquium, workshops supporting student practicum experiences and access to career services. These visits are designed to go beyond just a change in the delivery format of the courses to provide online students exposure to the aspects of the Berkeley experience that are better delivered in the traditional setting and cement connections to the Berkeley campus and community.

Online courses are offered in seven-, eight-, and 15-week formats through the regular fall and spring semesters as well as a "summer semester," which comprises summer instruction totaling 14 weeks. The online method of instruction balances the use of asynchronous resource materials and videos available to students 24/7 with graded asynchronous structured discussion sessions, and applied projects usually team based and in selected courses, client facing. Courses teaching technical skills offer synchronous labs sessions and many courses include optional live journal club sessions. In all courses, instructional teams offer weekly synchronous office hours. Asynchronous discussions are conducted by GSIs and monitored by the instructor to test knowledge gleaned from weekly course materials and reinforce the critical learning elements. Deliverables from team projects include both written and oral presentations.

All final exams are proctored. All students are required to pass a comprehensive exam to graduate with the MPH degree.

b) Rationale for offering online program

The UC Berkeley School of Public Health offers a professional MPH degree largely online to extend the school's learning environment beyond the university's physical boundaries, reduce the existing shortage of trained public health professionals, and increase the effectiveness of many mid-level public health professionals by preparing them in core public health competencies and enhancing their leadership skills in the complex and changing field of public health. The program is designed to help address the acute shortage of trained public health professionals in California and the nation by providing an alternative, high-quality graduate education for people who are unable to undertake a full-time, residential MPH program. The program uses a hybrid on-campus/online model designed to strike a fine balance of residential and online learning activities that respects the constraints that preclude frequent travel to the UC Berkeley campus. The online format meets the needs of those who wish to pursue an MPH degree to advance their professional competencies and expand their career opportunities while continuing to work on their current jobs. The program is designed specifically for employed mid-level professionals in public health agencies, non-profit community organizations, foundations, environmental health agencies, and health insurance plans who do not yet have formal public health training, as well as physicians, nurses, and other health professionals working in hospitals and health systems.

Admission standards and program quality are equivalent to the on-campus MPH program.

c) The manner in which it provides necessary administrative, information technology, and student support services

All administrative, IT, and student support services are provided in-house by faculty and staff in UC Berkeley School of Public Health. The program leadership includes an executive director (1.0 FTE) responsible for marketing, recruitment, program administration, financial management, and strategic planning. Academic leadership and curriculum oversight is provided by faculty including the faculty director (0.25 FTE), academic director (0.25 FTE), and a faculty lead for each of the three concentrations (0.75 FTE). Student services is led by the director of online student services and advising who oversees a team of graduate student academic officers (1.5 FTE), practicum advisors (1.5 FTE), and career advisors (0.2 FTE). IT support including exam proctoring, educational technology, and instructional design support is provided by the instructional design team (4.0 FTE).

d) The manner in which it monitors the academic rigor of the programs and their equivalence (or comparability) to other degree programs offered by the university

The MPH degree awarded to distance students is the UC Berkeley MPH degree with the same diploma as awarded to students completing traditional on-campus MPH programs. To assure equivalent quality, the school maintains admission requirements and curricular rigor to the same standard as the on-campus residential program. Academic rigor is monitored by both an internal Online MPH Steering Committee and the Online Education Faculty Steering Committee (a subcommittee of the Faculty Advisory Council, or FAC). As with all UC Berkeley graduate programs, the Graduate Council reviews the Online MPH program for academic rigor and student outcomes on a three-year cycle. For the first eight years of the program, because Public Health was the first online graduate degree offered at UC Berkeley, the Graduate Council required annual program reports. After the 2020 report, the Graduate Council relaxed the annual reporting for the Online MPH program to match reporting for all other graduate programs.

The majority (60%) of the 42 online courses offered are taught or co-taught by public health faculty including 16 courses taught/co-taught by Academic Senate faculty, six by full time adjunct faculty, four by full time continuing lecturers, and one by a visiting professor. Of the courses taught by part-time faculty, three are taught by UCSF faculty, four are taught by California Department of Public Health scientists, and eight by part-time lecturers with relevant professional experience. Online courses undergo the same

rigorous course review and approval process by the school and the campus Committee on Courses and Instruction (COCI) as courses delivered in person. All online courses receive annual internal program review of student learning and satisfaction and are rebuilt to remain current on a three year schedule. Rebuilds typically refresh about 60% of the course and faculty are provided with additional course development support for their rebuild. We continue to be intentional about how we listen to students about their experience and increasingly employ learning analytics to inform course improvements. Each year, before a course is offered, assigned readings and any time sensitive instructions (due dates, grading rubrics) are updated. For courses that cover topics that are rapidly changing (e.g., health care policy, infectious diseases), lecture content is updated annually to reflect the most current information in the field.

All final exams are physically proctored with picture ID verified by the proctor. The two residential summer programs on-campus allow program leadership to match online performance with what we observe on campus.

e) The manner in which it evaluates the educational outcomes, as well as the format and methods

The online program employs three metrics to evaluate educational outcomes and course quality: student satisfaction, student learning, and instructor satisfaction.

Student feedback is critical to evaluating educational outcomes. The program uses the same evaluation process as the on-campus MPH to evaluate student satisfaction. Each online course has a mid-course evaluation that is used to make mid-course adjustments and a formal end-of-course evaluation identical to the on-campus course evaluation. In addition at the end of each course, the Online MPH program asks additional questions related to the online tools, workload, and effectiveness of the online instruction. The program has an open culture regarding instructional improvement and the students are regularly reminded to send suggestions and feedback real-time to the academic director and/or the executive director rather than waiting for a formal evaluation. When the students are on campus during the summers, the program uses the opportunity to conduct focus groups around improvement questions and host small group student lunches with faculty who share takeaways with program leadership and staff.

Evaluation of student learning toward educational outcomes is continuous and happens in real time within courses and annually at the program level. Each course uses multiple modes to check for student learning so that immediate action can be taken by the instructional team. Reinforcement of student learning is accomplished by weekly activities (discussion forums, problem sets, case studies, group projects) that allow practices with principles, concepts, and skills to integrate the new knowledge acquired. Students are required to maintain at least a 3.0 (B) grade point average in all course work. Student progress is monitored closely and the director of online student services and advising (1 FTE) is available to support students and instructors at the earliest sign of under-performance, to see if there are non-academic issues playing a role in performance or if there is a need for more structured tutoring. For most of the courses the student must pass the proctored final to receive credit for the course. The comprehensive examination is an integrative exercise that asks students to use their knowledge to problem-solve using core competencies delivered by the program. The program is studying how it can improve its assessments to measure mastery of competencies in a more precise manner over time.

The third arm of evaluating educational outcomes is faculty satisfaction with teaching and student learning. We have a high level of faculty engagement in online MPH courses and as faculty have become more comfortable teaching online, they are increasingly leading the design, development, and delivery of their courses. The Online MPH program invests significant time and resources toward training and supporting faculty. We invest in building courses from the ground up, linking activities and assessments of learning to measurable learning objectives. Our team of four instructional designers provide continuous support from course proposal to design, development, delivery and debriefing of online courses. The instructional designers are part of each instructor's teaching team and provide just-in-time support, feedback, and evaluation of courses and teaching. We have found our faculty are very receptive to this support and engagement and readily include the instructional designers on their teaching teams.

For formal teaching evaluation, we use input from multiple sources including their digital presence in the bCourses site which we can track electronically, canvas analytics to assess student engagement with digital content, GSI feedback, traditional student feedback, Online MPH–specific student feedback, instructional designer feedback, and instructor feedback (self-reflection).

Teaching teams, which include an instructional designer, annually debrief each online course, considering student satisfaction, learning towards course outcomes, and instructor satisfaction to identify areas for improvement. This debriefing is particularly helpful after an online course is offered for the first time. Following a continuous quality improvement approach, updates to course materials are made as identified in the debriefing and faculty are provided with additional course development support as needed. Faculty receive the most guidance in the first two years of offering an online course. Afterwards we see faculty develop the competencies to effectively teach in an online space. We also see that faculty enjoy the opportunity to work with mid-career professionals.

**(3) Describe the processes that the university uses to verify that the student who registers in a distance education course (as part of a distance-based degree) or a fully distance-based degree is the same student who participates in and completes the course or degree and receives the academic credit.**

When students matriculate they receive an official CalNet ID which is required for accessing all campus systems including the learning management system, where course materials are posted, students participate in course activities ,and submit course deliverables. The university pairs a bimonthly two-step authentication process with the CalNet Authentication requiring students to authenticate with a timed passcode sent by text to the phone on record every two weeks.

When students arrive on campus for the first intensive on-campus visit, their identity is verified by driver's licenses or passports as part of receiving their student photo id card. At UC Berkeley, official student ID cards must be picked up in person after showing photo ID.

Further, the Online MPH program has a culture of community where the expectation is to get to know our students and regularly interact with them in support of their professional goals. Beyond campus processes, students regularly engage via Zoom with academic, practicum, and career advisors where these relationships are established. The on-campus visits are an important identity verification where program faculty and staff focus on getting to know our students and thus language proficiency, and participation characteristics are observed for anomalies. Separately, students engage in group work in many of their online courses. They then meet these cohort “buddies” on campus. This acts as a deterrent for identity substitution during the online parts of the program.

Finally and critically, each course has a proctored exam where each student's picture ID is verified by the proctor before they can begin the exam and after they have logged in using the campus Calnet verification system. The comprehensive exam is also proctored after identity verification in the same way.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: The Online MPH program has been consistently ranked among the top three online MPH programs in the U.S. It has allowed us to extend and scale the reach and impact of our education in the world. The Online MPH program matriculated its first cohort of students over 10 years ago and has become a well-established and growing program well-integrated within the school. As the first online graduate degree program offered on the UC Berkeley campus, it was reviewed annually by campus from 2012 to 2020 and has been subject to similar scrutiny of its student experience and learning outcomes internally within the school. The program's reputation for educational excellence is well known on campus and within the school. So much so that online courses are available to all students as meeting course requirements as well as sought after by students in other graduate programs serving mid-career professionals including the Haas School of Business, Goldman School of Public Policy, and School of Engineering, among others.

A major strength of this program is that it is fully run by the school and not administered in any way by a for-profit educational management company. Program decisions are made using the same shared governance model as other programs in the School of Public Health and on the UC Berkeley campus. This also has resulted in the online program being fully integrated into the larger school rather than a side effort.

Plans for Improvement: An important current area for improvement is in exam proctoring. The COVID pandemic was very disruptive to the program's proctoring systems. Pre-pandemic, students registered with a physical proctor in their geographical location where they would show their photo ID. Due to many shutdowns of Community Colleges, libraries, and testing centers during the height of the COVID-19 pandemic, proctoring shifted to a Zoom-based process. Given current concerns over student privacy during proctored exams, the UC Berkeley campus has implemented policies on [remote proctoring](#) that the online program is implementing.

## E1. Faculty Alignment with Degrees Offered

Faculty teach and supervise students in areas of knowledge with which they are thoroughly familiar and qualified by the totality of their education and experience.

Faculty education and experience is appropriate for the degree level (bachelor's, master's, doctoral) and the nature of the degree (research, professional practice, etc.) with which they are associated.

- (1) Provide a table showing the school or program's primary instructional faculty in the format of Template E1-1. The template presents data effective at the beginning of the academic year in which the final self-study is submitted to CEPH and must be updated at the beginning of the site visit if any changes have occurred since final self-study submission. The identification of instructional areas must correspond to the data presented in Template C2-1.

Schools should only include data on faculty associated with public health degrees.

**Table E1.1.1 Primary Instructional Faculty Alignment with Degrees Offered**

Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Ahern, Jennifer E.	PROF-AY	Tenure	PhD	UC Berkeley	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatISTICS
Allen, Amani M.	PROF-AY	Tenure	PhD	Johns Hopkins	Health Policy and Management	HEALTH & SOCIAL BEHAVIOR, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatISTICS
Balzer, Laura	ASSOC PROF IN RES-AY	Non-tenure	PhD	UC Berkeley	Biostatistics	BIostatISTICS, EPIDEMIOLOGY/ BIostatISTICS
Barcellos, Lisa Fischer	PROF-AY	Tenure	PhD	UC Berkeley	Immunology/ Human Genetics	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatISTICS, PUBLIC HEALTH

Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Bertozzi, Stefano	PROF-AY	Tenure	PhD	MIT	Health Policy & Management	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE, PUBLIC HEALTH
Bradshaw, Patrick Terrence	ASSOC PROF-AY	Tenure	PhD	University of North Carolina.	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics
Brewster, Amanda L.	ASST PROF-AY	Tenure-track	PhD	Boston University	Health Services Research	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE
Colford, John M	PROF-AY	Tenure	PhD	UC Berkeley	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, INTERDISCIPLINARY
Costello, Sadie Cash	ASSOC ADJ PROF-AY	Non-tenure	PhD	UCLA	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES
Dai, Xiongtao	ASST PROF-AY	Tenure-track	PhD	UC Davis	Statistics	BIostatistics
De Almeida Rijo Ferreira, Ana Filipa	ASST PROF-AY	Tenure-track	PhD	Universidade do Porto	Biology, General	INFECTIOUS DISEASES, INFECTIOUS DISEASES & IMMUNITY
De La Rosa, Rosemarie	ASST PROF-AY	Tenure-track	PhD	UC Berkeley	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES

Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Deardorff, Julianna	ASSOC PROF-AY	Tenure	PhD	Arizona State University	Clinical Psychology	MATERNAL, CHILD & ADOLESCENT HEALTH, PUBLIC HEALTH
Dow, William H.	PROF-AY	Tenure	PhD	Yale University	Economics	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE
Eisen, Ellen	PROF IN RES-AY	Non-tenure	DSc	Harvard University	Biostats & Occupational Hlth	ENVIRONMENTAL HEALTH SCIENCES, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatISTICS
Fernald, Lia Haskin	PROF-AY	Tenure	PhD	University of London	Public Health Nutrition	PUBLIC HEALTH NUTRITION, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatISTICS, PUBLIC HEALTH
Fleming, Mark D.	ASST PROF-AY	Tenure-track	PhD	UCSF and UC Berkeley	Medical Anthropology	HEALTH & SOCIAL BEHAVIOR
Francis, Darlene D.	ASSOC PROF-AY	Tenure	PhD	McGill University	Neurological Sciences	HEALTH & SOCIAL BEHAVIOR, PUBLIC HEALTH
Fulton, Brent	ASSOC ADJ PROF-AY	Non-tenure	PhD	Pardee RAND Graduate School	Public Policy Analysis	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE, PUBLIC HEALTH



Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Graham, Jay P.	ASST PROF IN RES-AY	Non-tenure	PhD	Johns Hopkins Bloomberg School of Public Health	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT, INTERDISCIPLINARY
Halpern, Jodi	PROF-FY	Tenure	PhD	Yale University	Philosophy	HEALTH & SOCIAL BEHAVIOR, INTERDISCIPLINARY
Harris, Eva	PROF-AY	Tenure	PhD	UC Berkeley	Molecular and Cell Biology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, INFECTIOUS DISEASES, INFECTIOUS DISEASES & IMMUNITY, PUBLIC HEALTH
Herd, Denise A.	PROF-AY	Tenure	PhD	UCSF	Anthropology	HEALTH & SOCIAL BEHAVIOR, PUBLIC HEALTH
Hubbard, Alan E.	PROF-AY	Tenure	PhD	UC Berkeley	Biostatistics	BIostatistics, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, PUBLIC HEALTH
Ivey, Susan	ADJ PROF-AY	Non-tenure	MD	St. George's University School of Medicine	Medicine	JOINT MEDICAL PROGRAM
Keller, Ann C.	ASSOC PROF-AY	Tenure	PhD	UC Berkeley	Political Science	HEALTH & SOCIAL BEHAVIOR
Kwong, Laura H.	ASST PROF-AY	Tenure-track	PhD	Stanford University	Civil & Environmental Engineering	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT
Laraia, Barbara A.	PROF-AY	Tenure	PhD	University of North Carolina	Nutrition	PUBLIC HEALTH NUTRITION, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics
Lewnard, Joseph A.	ASST PROF-AY	Tenure-track	PhD	Yale University	Epidemiology of Microbial Diseases	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics

Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Li, Lexin	PROF-AY	Tenure	PhD	University of Minnesota	Statistics	BIostatistics, Epidemiology/ BIostatistics
Liu, Fenyong	PROF-AY	Tenure	PhD	University of Chicago	Biochemistry and Molecular Biology	INFECTIOUS DISEASES, INFECTIOUS DISEASES & IMMUNITY, PUBLIC HEALTH
Lu, Michael C.	DEAN	Tenure	MD	UCSF	Obstetrics and Gynecology	MATERNAL, CHILD & ADOLESCENT HEALTH
Madsen, Kristine Ann	PROF-AY	Tenure	MD	Indiana University	Medicine	PUBLIC HEALTH NUTRITION, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, PUBLIC HEALTH
Madzorera, Isabel	ASST PROF-AY	Tenure-track	Doctor of Science	Harvard T.H. Chan School of Public Health	Nutrition, Epidemiology	PUBLIC HEALTH NUTRITION
Marbin, Jyothi N.	HS CLIN PROF-FY	Clinical Professor, UC Berkeley	MD	Warren Alpert Medical School of Brown University	Pediatrics	JOINT MEDICAL PROGRAM
Marshall, Cassandra J.	ASST PROF-AY	Tenure-track	DPH	UC Berkeley	Family Planning, Community Health	MATERNAL, CHILD & ADOLESCENT HEALTH
Marshall, John Macky	ASSOC PROF IN RES-AY	Non-tenure	PhD	UCLA	Biomathemati cs	BIostatistics, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics
McCoy, Sandra	PROF IN RES-AY	Non-tenure	PhD	University of North Carolina	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, INTERDISCIPLINARY
Metayer, Catherine S.	ADJ PROF-AY	Non-tenure	PhD	Tulane School of Public Health	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics

Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Miller, Veronica	ADJ PROF-AY	Non-tenure	PhD	University of Manitoba	Immunology	INFECTIOUS DISEASES, INTERDISCIPLINARY
Mujahid, Mahasin S.	ASSOC PROF-AY	Tenure	PhD	University of Michigan	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, PUBLIC HEALTH
Obermeyer , Ziad	ASSOC PROF-AY	Tenure	MD	Harvard Medical School	Emergency Medicine	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE
Ozer, Emily J.´	PROF-AY	Tenure	PhD	UC Berkeley	Clinical Psychology	HEALTH & SOCIAL BEHAVIOR, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics, PUBLIC HEALTH
Petersen, Maya	ASSOC PROF-AY	Tenure	PhD	UC Berkeley	Biostatistics	BIostatistics, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics
Pillarisetti, Ajay	ASST PROF-AY	Tenure-track	PhD	UC Berkeley	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT
Prata, Ndola	PROF IN RES-AY	Non-tenure	MD	University of Angola	Medicine	MATERNAL, CHILD & ADOLESCENT HEALTH, PUBLIC HEALTH
Reingold, Arthur L.	PROF-AY	Tenure	MD	University of Chicago	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIostatistics
Remais, Justin V.	PROF-AY	Tenure	PhD	UC Berkeley	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT

Name	Title/ Academic Rank	Tenure Status or Classification	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Riddell, Corinne A.	ASST ADJ PROF-AY	Non-tenure	PhD	McGill University	Epidemiology	BIostatistics, Epidemiology, Epidemiology/ BIostatistics
Robinson, James C.	PROF-AY	Tenure	PhD	UC Berkeley	Economics	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE
Rodriguez, Hector P.	PROF-AY	Tenure	PhD	Harvard	Health Policy/Medical Sociology	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE
Schuler, Alejandro	ASST PROF IN RES-AY	Non-tenure	PhD	Stanford University	Biomedical Informatics	BIostatistics, Epidemiology/ BIostatistics
van der Laan, Mark	PROF-AY	Tenure	PhD	Utrecht (Netherlands)	Mathematics	BIostatistics
Wang, Jingshen	ASST PROF-AY	Tenure-track	PhD	University of Michigan	Statistics	BIostatistics, Epidemiology, Epidemiology/ BIostatistics

- (2) Provide summary data on the qualifications of any other faculty with significant involvement in the school's public health instruction in the format of Template E1-2. Schools define "significant" in their own contexts but, at a minimum, include any individuals who regularly provide instruction or supervision for required courses and other experiences listed in the criterion on Curriculum. Reporting on individuals who supervise individual students' practice experience (preceptors, etc.) is not required. The identification of instructional areas must correspond to the data presented in Template C2-1.

Table E1.2.1 Non-Primary Instructional Faculty Regularly Involved in Instruction

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Apte, Joshua Schulz	ASSOC PROF-A Y-B/E/E	Associate Professor, UC Berkeley	0.50	PhD	UC Berkeley	Energy and Resources	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT
Auerswald, Colette Leslie	PROF OF CLIN-FY	Professor, UC Berkeley	0.85	MD	UC San Francisco	Pediatrics	MATERNAL, CHILD & ADOLESCENT HEALTH, PUBLIC HEALTH
Ayala-Ramirez, Montserrat	LECT-FY	Lecturer, UC Berkeley	0.33	MD	University of Guadalajara, Mexico	Internal Medicine	INTERDISCIPLINARY
Azzam, Amin N.	HS ASSOC CLIN PROF-A Y	Associate Clinical Professor, UC Berkeley	0.20	MD	UCSF	Psychiatry	JOINT MEDICAL PROGRAM
Baker, Hildy F	LECT-FY	Lecturer, UC Berkeley	0.25	PhD	Chinese University of Hong Kong	Health Policy	INTERDISCIPLINARY
Barot, Dipti Surendra	LECT-AY -1/10	Lecturer, UC Berkeley	0.20	MD	University of Illinois College of Medicine	Medicine	JOINT MEDICAL PROGRAM
Baxter-Lamb, Sheila Sabahat	LECT-AY -1/10	Lecturer, UC Berkeley	0.17	MPH	UC Berkeley	Health Policy and Management	INTERDISCIPLINARY
Bennett, Ariana H.	LECT-AY -1/10	Lecturer, UC Berkeley	0.33	MPH	Columbia University	Sociomedical Sciences	MATERNAL, CHILD & ADOLESCENT HEALTH

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Berglas, Nancy F.	LECT-AY -1/10	Lecturer, UC Berkeley	0.17	DrPH	UC Berkeley	Public Health	MATERNAL, CHILD & ADOLESCENT HEALTH
Breckler, Jennifer	LECT-AY -CONTINUING	Lecturer, UC Berkeley	0.20	PhD	UCLA	Physiology	JOINT MEDICAL PROGRAM
Brooks, Katherine Carlson	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.10	MD	Alpert Medical School of Brown University	Medicine	JOINT MEDICAL PROGRAM
Brown, Julie M.	LECT-FY	Lecturer, UC Berkeley	0.17	MBA	UC Berkeley	Business Administration and Public Health	HEALTH POLICY & MANAGEMENT
Brown, Timothy Tyler	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.67	PhD	UC Berkeley	Health Services and Policy Analysis	HEALTH POLICY & MANAGEMENT, HEALTH POLICY: HEALTH ECONOMICS, HEALTH POLICY: ORGANIZATIONS & MANAGEMENT, HEALTH POLICY: POPULATION & DATA SCIENCE, INTERDISCIPLINARY
Butzin-Dozier, Zachary	LECT-FY	Lecturer, UC Berkeley	0.07	PhD Candidate	UC Berkeley	Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS
Cakouros, Brigid Ellen	LECT-FY	Lecturer, UC Berkeley	0.33	DrPH	UC Berkeley	Public Health	INTERDISCIPLINARY
Chung, Koohong	LECT-AY -1/10-CONTINUING	Lecturer, UC Berkeley	0.00	PhD	UC Berkeley	Civil and Environmental Engineering	ENVIRONMENTAL HEALTH SCIENCES
Corburn, Jason	PROF-AY	Professor, UC Berkeley	0.50	PhD	Massachusetts Institute of Technology	Urban Environmental Planning	HEALTH & SOCIAL BEHAVIOR

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Cribb Fabersunne, Camila Susana	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.00	MD, MPH	Harvard University	Medicine, Research Methodology and Quantitative Methods	JOINT MEDICAL PROGRAM
Dahl, Ronald E.	PROF-AY	Professor, UC Berkeley	0.50	MD	University of Pittsburgh	Medicine	MATERNAL, CHILD & ADOLESCENT HEALTH
Dailey, Peter James	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.00	PhD	UC Berkeley	Microbiology	INFECTIOUS DISEASES
Decker, Mara	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.50	DrPH	UC Berkeley	Public Health	PUBLIC HEALTH, INTERDISCIPLINARY
Dolan, Emma L.	LECT-FY	Lecturer, UC Berkeley	0.17	MPP, MPH	UC Berkeley	Public Policy; Public Health	HEALTH POLICY & MANAGEMENT
Dorfman, Lori E.	ADJ PROF-AY	Adjunct Professor	0.33	DrPH	UC Berkeley	Public Health	HEALTH & SOCIAL BEHAVIOR
Doshi, Neeti	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.10	MD	University of North Carolina	Medicine	JOINT MEDICAL PROGRAM
Ehie, Odinakachukwu A.	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.20	MD	University of Wisconsin	Medicine	JOINT MEDICAL PROGRAM
Enanoria, Wayne T.	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.33	PhD	UC Berkeley	Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS
Facente, Shelley N.	LECT-AY -1/10	Lecturer, UC Berkeley	0.33	PhD	UC Berkeley	Epidemiology	HEALTH & SOCIAL BEHAVIOR, PUBLIC HEALTH
Flagg, Robin L.	LECT-AY -CONTINUING	Lecturer, UC Berkeley	0.53	PhD	UC Berkeley	Health Services and Policy Analysis	HEALTH POLICY & MANAGEMENT, PUBLIC HEALTH
Gaarde, Jenna P.	LECT-FY	Lecturer, UC Berkeley	0.08	MPH	UC Berkeley	Public Health	INTERDISCIPLINARY

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Gadgil, Meghana A.	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.33	MD	Rutgers New Jersey Medical School	Medicine	INTERDISCIPLINARY
Gallington, Kyli N.	LECT-FY	Lecturer, UC Berkeley	0.33	MPH	UC Berkeley	Public Health	INTERDISCIPLINARY
Garlin, Amy B.	HS ASSOC CLIN PROF-AY	Associate Clinical Professor, UC Berkeley	0.17	MD	UCSF	Internal Medicine	INFECTIOUS DISEASES
Gebbie, Eric N.	LECT-FY	Lecturer, UC Berkeley	0.33	DrPH	University of Illinois Chicago	Public Health	INTERDISCIPLINARY
Griffin, Joseph Suratos	LECT-AY -1/10	Lecturer, UC Berkeley	0.38	DrPH, MPH	UC Berkeley	Public Health	HEALTH & SOCIAL BEHAVIOR
Grube, Joel W.	ADJ PROF-AY	Adjunct Professor, UC Berkeley	0.10	PhD	Washington State University	Psychology	HEALTH & SOCIAL BEHAVIOR
Haar, Rohini Jonnalagadda	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.62	MD	University of Chicago	Medicine	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS, INTERDISCIPLINARY
Hahn, Monica U.	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.10	MD, MPH	UCSF, UC Berkeley	Family Medicine, Public Health	JOINT MEDICAL PROGRAM
Harley, Kim G.	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.60	PhD	UC Berkeley	Epidemiology	MATERNAL, CHILD & ADOLESCENT HEALTH, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Harris-Adams, Carisa	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.33	PhD	UC Berkeley	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES
Head, Jennifer	LECT-AY	Lecturer, UC Berkeley	0.33	PhD	UC Berkeley	Epidemiology	INTERDISCIPLINARY
Heaney, Alexandra K.	LECT-AY -1/10	Lecturer, UC Berkeley	0.22	PhD	Columbia University	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT



Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Hemmerling, Anke	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.41	PhD	Humboldt University Berlin	Medical Sciences	INTERDISCIPLINARY
Hiatt, Robert	ADJ PROF-AY	Adjunct Professor, UC Berkeley	0.00	PhD, MPH	UC Berkeley	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Hine, Tracy P.	LECT-AY	Lecturer, UC Berkeley	0.25	DrPH	UC Berkeley	Epidemiology	INTERDISCIPLINARY
Iton, Anthony B.	LECT-AY -1/10-CO NTINUIN G	Lecturer, UC Berkeley	0.17	MD, JD, MPH	Johns Hopkins, UC Berkeley	Public Health, Medicine, Law	HEALTH POLICY & MANAGEMENT
Jagust, William J.	PROF-AY	Professor, UC Berkeley	0.50	MD	Stony Brook University, New York	Medicine	HEALTH & SOCIAL BEHAVIOR, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Jain, Anoop	LECT-FY	Lecturer, UC Berkeley	0.33	PhD	UC Berkeley	Environmental Health Sciences	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS, INTERDISCIPLINARY
Jekanowski, Elizabeth R.	LECT-FY	Lecturer, UC Berkeley	0.66	MPH, MPP	UC Berkeley	Public Health and Policy	HEALTH POLICY & MANAGEMENT
Jeter, Kira E.	LECT-FY	Lecturer, UC Berkeley	0.25	DrPH	UC Berkeley	Public Health	INTERDISCIPLINARY
Johnson, Anna Maureen	LECT-AY -1/10	Lecturer, UC Berkeley	0.33	MPP	UC Berkeley	Public Policy	HEALTH POLICY & MANAGEMENT
Kang Dufour, Mi-Suk J.	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.27	PhD	UC Berkeley	Epidemiology	BIOSTATISTICS, EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS, PUBLIC HEALTH
Krishnan, Kannan	LECT-AY -1/10	Lecturer, UC Berkeley	0.33	PhD	University of Montreal	Community Health	ENVIRONMENTAL HEALTH SCIENCES
Lachance, Jennifer Alice	LECT-AY -CONTINUING	Lecturer, UC Berkeley	0.50	DrPH	UC Berkeley	Public Health	PUBLIC HEALTH
Landau, Claudia	HS ASSOC CLIN PROF-AY	Associate Clinical Professor, UC Berkeley	0.40	MD	UC Davis	Medicine	JOINT MEDICAL PROGRAM

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Larson, Michelle L.	LECT-FY	Lecturer, UC Berkeley	0.33	MPA, PhD	University of Minnesota	Public Affairs; Organizational Leadership, Policy and Development	INTERDISCIPLINARY
Lee, Kevin Fung	LECT-FY	Lecturer, UC Berkeley	0.33	DrPH	UC Berkeley	Public Health	INTERDISCIPLINARY
Lee, Scott Eunjohn	VIS ASST PROF	Visiting Assistant Professor, UC Berkeley	0.00	MD	Brown University, MD-MPH from UCLA/Harvard	Ophthalmology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS, PUBLIC HEALTH
Lopatin, Irina Titova	LECT-FY	Lecturer, UC Berkeley	0.44	MPH	UC Berkeley	Health Policy and Management	HEALTH POLICY & MANAGEMENT
Mack, Hannah Christine	LECT-AY -1/10	Lecturer, UC Berkeley	0.25	MPH	UC Berkeley	Health and Social Behavior	HEALTH & SOCIAL BEHAVIOR
MacPherson, Kimberly	LECT-AY -1/10	Lecturer, UC Berkeley	0.42	MBA, MPH	UC Berkeley	Health Policy and Management	HEALTH POLICY & MANAGEMENT
Malawa, Zea N.	VIS ASSOC PROF	Lecturer, UC Berkeley	0.22	MD	UCLA	Pediatrics	INTERDISCIPLINARY
Marafino, Ben Joseph	LECT-FY	Lecturer, UC Berkeley	0.33	PhD	Stanford University	Biomedical Informatics	BIOSTATISTICS
Martinez-Matyszczyk, Priscilla	LECT-AY	Lecturer, UC Berkeley	0.20	PhD	University of Oslo, Norway	Addiction Research	HEALTH & SOCIAL BEHAVIOR
Maus, Marlon	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.00	MD, DrPH	Jefferson Medical College, UC Berkeley	Ophthalmology	HEALTH & SOCIAL BEHAVIOR
Mertens, Andrew N.	LECT-FY	Lecturer, UC Berkeley	0.34	PhD	UC Berkeley	Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS, INTERDISCIPLINARY
Mindry, Deborah	LECT-AY -1/10	Lecturer, UC Berkeley	0.22	PhD	UCLA	Anthropology	MATERNAL, CHILD & ADOLESCENT HEALTH
Mocello, Adrienne J.	LECT-FY	Lecturer, UC Berkeley	0.14	PhD	UC Berkeley	Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Morello-Frosch, Rachel A.	PROF-AY	Professor, UC Berkeley	0.50	PhD	UC Berkeley	Environmental Health Sciences	HEALTH & SOCIAL BEHAVIOR
Nair, Deepthi S.	LECT-FY	Lecturer, UC Berkeley	0.33	MPH	UC Berkeley	Public Health	INTERDISCIPLINARY
Nelson, Lauren N.	LECT-FY	Lecturer, UC Berkeley	0.17	MPH	Emory University	Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS
O'Hara, Sharon Elizabeth	LECT-FY	Lecturer, UC Berkeley	0.13	DrPH, MPH	UC Berkeley	Public Health	PUBLIC HEALTH, INTERDISCIPLINARY
Obasogie, Osagie K.	PROF-AY	Professor, UC Berkeley	0.50	PhD	UC Berkeley	Sociology	HEALTH & SOCIAL BEHAVIOR, JOINT MEDICAL PROGRAM
Oman, Douglas W.	ADJ PROF-AY	Adjunct Professor, UC Berkeley	0.00	PhD	UC Berkeley	Biostatistics	HEALTH & SOCIAL BEHAVIOR
Piatt, Amber Akemi	LECT-AY -1/10	Lecturer, UC Berkeley	0.17	MPH	UC Berkeley	Health and Social Behavior	INTERDISCIPLINARY
Place, Emily Jean	LECT-FY	Lecturer, UC Berkeley	0.33	PhD, MPH	University of Connecticut; UC Berkeley	Molecular and Cell Biology; Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS
Plotzker, Rosalyn E.	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.00	MD, MPH	SUNY Downstate College of Medicine, Icahn School of Medicine at Mount Sinai Hospital	Medicine	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Pokhrel, Amod Kumar	LECT-FY	Lecturer, UC Berkeley	0.33	PhD	UC Berkeley	Environmental Health Sciences	INTERDISCIPLINARY
Popper, Stephen John	LECT-AY -1/10	Lecturer, UC Berkeley	0.17	Sc.D	Harvard School of Public Health	Immunology and Infectious Diseases	INFECTIOUS DISEASES
Ragland, David R.	RECALL FACULTY	Professor Emeritus, UC Berkeley	0.43	PhD	State University of New York	Psychology	ENVIRONMENTAL HEALTH SCIENCES
Readhead, Adam Charles	LECT-FY	Lecturer, UC Berkeley	0.33	PhD	UCLA	Epidemiology	INTERDISCIPLINARY

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Richards, Avery Hastings	LECT-FY	Lecturer, UC Berkeley	0.33	MPH	UC Berkeley	Public Health	EPIDEMIOLOGY/ BIOSTATISTICS
Rivera, Gaspar	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.10	MD	UC Irvine	Pediatrics	JOINT MEDICAL PROGRAM
Robles, Omar	LECT-FY	Lecturer, UC Berkeley	0.33	PhD	Harvard University	Economics	INTERDISCIPLINARY
Rutherford, George W.	ADJ PROF-AY	Adjunct Professor, UC Berkeley	0.00	MD	Duke University	Medicine, Pediatrics	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Sagiv, Sharon Karnit	ASSOC ADJ PROF-AY	Associate Adjunct Professor, UC Berkeley	0.25	PhD	University of North Carolina	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Sandhu, Jaspal Singh	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.10	PhD	UC Berkeley	Design and Innovation	MATERNAL, CHILD & ADOLESCENT HEALTH
Schwarzman, Megan R.	ASSOC PROJ SCIENTIST-FY NEX	Associate Project Scientist, UC Berkeley	0.33	MD	University of Massachusetts	Medicine	ENVIRONMENTAL HEALTH SCIENCES
Scott, Grace Marie	LECT-FY	Lecturer, UC Berkeley	0.33	MPH	UC Berkeley	Health Policy and Management	HEALTH POLICY & MANAGEMENT
Sedki, Mai	LECT-AY -1/10	Lecturer, UC Berkeley	0.17	PhD, MPH	UCSF, UC Berkeley	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Seward, James P.	HS CLIN PROF-AY	Clinical Professor, UC Berkeley	0.00	MD	UCSF	Medicine	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Shaahinfar, Ashkon	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.10	MD	UCSF	Medicine	JOINT MEDICAL PROGRAM
Sheats, Jylana L.	LECT-FY	Lecturer, UC Berkeley	0.33	PhD	Indiana University	Health Behavior, Public Affairs	INTERDISCIPLINARY
Sheats, Jylana L.	LECT-AY -1/10	Lecturer, UC Berkeley	0.25	PhD	Indiana University	Health Behavior, Public Affairs	INTERDISCIPLINARY

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Shor, Glenn M.	LECT-AY -1/10-CO NTINUIN G	Lecturer, UC Berkeley	0.11	PhD	UC Berkeley	Public Policy	ENVIRONMENTAL HEALTH SCIENCES
Slater, Amy B.	LECT-FY	Lecturer, UC Berkeley	0.33	JD	UC Hastings College of the Law	Law	INTERDISCIPLINARY
Smith, Charlotte	LECT-AY -1/10-CO NTINUIN G	Lecturer, UC Berkeley	0.00	PhD	UC Berkeley	Environmental Health Sciences	ENVIRONMENTAL HEALTH SCIENCES, GLOBAL HEALTH & THE ENVIRONMENT, PUBLIC HEALTH
Sninsky, John J.	VIS ASSOC PROF	Visiting Associate Professor, UC Berkeley	0.00	PhD	Purdue College	Infectious Diseases	INFECTIOUS DISEASES
Sokal-Gutierrez, Karen B.	HS CLIN PROF-AY	Clinical Professor, UC Berkeley	0.44	MD	UCSF	Medicine	INTERDISCIPLINARY
Spangler, Barbara G.	LECT-FY	Lecturer, UC Berkeley	0.33	MBA, MPH	Babson College, UC Berkeley	Business Administration, Public Health	EPIDEMIOLOGY/ BIOSTATISTICS
Stine, Shelene K.	LECT-AY	Lecturer, UC Berkeley	1.00	MD	Emory University School of Medicine	Medicine	JOINT MEDICAL PROGRAM
Strouse, Carly Elizabeth	LECT-AY -1/10	Lecturer, UC Berkeley	0.50	DrPH	UC Berkeley	Public Health	MATERNAL, CHILD & ADOLESCENT HEALTH, PUBLIC HEALTH
Subbaraman, Meenakshi Sabina	LECT-AY -1/10	Lecturer, UC Berkeley	0.25	PhD	UC Berkeley	Epidemiology	EPIDEMIOLOGY, EPIDEMIOLOGY/ BIOSTATISTICS
Susarla, Sita Manasa	LECT-FY	Lecturer, UC Berkeley	0.33	MPH	UC Berkeley	Epidemiology and Biostatistics	EPIDEMIOLOGY/ BIOSTATISTICS
Swartzberg, John E.	RECALL FACULT Y	Recall Faculty, UC Berkeley	0.08	MD	UCLA	Medicine	INFECTIOUS DISEASES, INTERDISCIPLINARY
Teran, Suzanne P.	LECT-AY -1/10	Lecturer, UC Berkeley	0.25	MPH	UC Berkeley	Community Health Education	ENVIRONMENTAL HEALTH SCIENCES

Name	Academic Rank	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution (s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Thompson, Hannah Ruth	ASST ADJ PROF-AY	Assistant Adjunct Professor, UC Berkeley	0.85	PhD	UCSF	Epidemiology and Translational Science	PUBLIC HEALTH NUTRITION
Unti-Bruce, Lisa Marie	LECT-FY	Lecturer, UC Berkeley	0.33	MPH	San Jose State University	Community Health Education	INTERDISCIPLINARY
Valbuena, Gustavo A.	HS ASSOC CLIN PROF-AY	Associate Clinical Professor, UC Berkeley	0.90	MD	Javeriana University, Bogota, Colombia	Medicine	JOINT MEDICAL PROGRAM
Van Brunt, Deryk E.	Affiliated Organization	Associate Clinical Professor, UC Berkeley	0.00	DrPH	UC Berkeley	Health Informatics	EPIDEMIOLOGY/ BIOSTATISTICS, PUBLIC HEALTH
van der Walt, Lauren A. K.	LECT-AY -1/10	Lecturer, UC Berkeley	0.33	PhD	UC Berkeley	Public Health Policy	HEALTH & SOCIAL BEHAVIOR, PUBLIC HEALTH
Vandommelen-Gonzalez, Evan	LECT-FY	Lecturer, UC Berkeley	0.33	DrPH	UC Berkeley	Public Health	PUBLIC HEALTH, INTERDISCIPLINARY
Webb, Kenneth H.	LECT-AY -1/10	Lecturer, UC Berkeley	0.30	MD	Cornell University	Medicine	HEALTH POLICY & MANAGEMENT
Wheeler, William Hampton	LECT-FY	Lecturer, UC Berkeley	0.17	PhD	Georgia State University	Epidemiology	EPIDEMIOLOGY/ BIOSTATISTICS
Williams, Kevin D.	LECT-AY -1/10	Lecturer, UC Berkeley	0.33	JD, MPH	University of Houston, UC Berkeley	Law, Public Health	PUBLIC HEALTH
Wolf, Ashley R.	ASST PROF-AY	Tenure-track	0.50	PhD	Harvard University	Systems Biology	INFECTIOUS DISEASES, INFECTIOUS DISEASES & IMMUNITY
Woolridge, Daniel	LECT-AY	Lecturer, UC Berkeley	0.68	MD	UC San Diego	Medicine	JOINT MEDICAL PROGRAM
Zyba, Sarah	LECT-FY	Lecturer, UC Berkeley	0.25	PhD	UC Davis	Nutritional Biology	PUBLIC HEALTH NUTRITION

**(3) Include CVs for all individuals listed in the templates above.**

CVs are available in ERF E1.4.

**(4) If applicable, provide a narrative explanation that supplements reviewers' understanding of data in the templates.**

Included in Table E1.1. are faculty who instruct and have a 1.0 FTE at the school. These faculty primarily include our ladder-rank faculty, professors-in-residence, and some adjunct faculty. Table E1.2. includes faculty who instruct and have less than 1.0 FTE in the school. These non-primary faculty include certain ladder-rank faculty with split appointments shared outside of the school, adjunct faculty, and lecturers. Although these non-primary faculty have less than 1.0 FTE, they are still very involved in the school. Faculty listed with 0 FTE for the most part hold appointments outside the school and their appointments within the school are without salary.

**(5) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: UC Berkeley School of Public Health has arguably one of the best public health faculty in the world. The election of three faculty members (Hector Rodriguez, HPM; Osagie Obasogie, CHS; Rachel Morello-Frosch, EHS) into the National Academy of Medicine in the past five years is a testament to the strength of our faculty. As noted in Section E4: Faculty Scholarship, our faculty's impressive grant success rate exceeds 40%, providing ample opportunities for students to learn leading-edge research methods. The number of primary and non-primary instructional faculty surpasses the minimums required for the degrees and concentrations offered at the school.

Plans for Improvement: The addition of 12 Senate faculty in the past three years (with five more searches currently underway) has addressed many critical vacancies created by a significant generational transition that has taken place during this past decade. Our job is to continue to grow our comprehensive excellence. *Invest in Human Capital* is a strategy to achieve UC Berkeley School of Public Health's goal of innovating solutions to four of the most pressing public health threats of our time: climate change, pandemic threats, chronic diseases, and social inequality. Our multi-year faculty recruitment plan will prioritize recruitment of the best and brightest talents in these four strategic priority areas, and invest in research support to unleash their fullest potential.

---

## E2. Integration of Faculty with Practice Experience

---

To assure a broad public health perspective, the school employs faculty who have professional experience in settings outside of academia and have demonstrated competence in public health practice. Schools encourage faculty to maintain ongoing practice links with public health agencies, especially at state and local levels.

To assure the relevance of curricula and individual learning experiences to current and future practice needs and opportunities, schools regularly involve public health practitioners and other individuals involved in public health work through arrangements that may include adjunct and part-time faculty appointments, guest lectures, involvement in committee work, mentoring students, etc.

- (1) Describe the manner in which the public health faculty complement integrates perspectives from the field of practice, other than faculty members' participation in extramural service, as discussed in Criterion E5. The unit may identify full-time faculty with prior employment experience in practice settings outside of academia, and/or units may describe employment of part-time practice-based faculty, use of guest lecturers from the practice community, etc.

UC Berkeley School of Public Health faculty are known for their community-engaged scholarship, locally and globally. Faculty routinely integrate perspectives from the field of practice into their teaching and mentoring.

For example,

- **Dr. Rachel Morello-Frosch**, professor in Environmental Health Sciences and Community Health Sciences, examines social determinants of environmental health among diverse communities with a focus on inequality, psychosocial stress, and how these factors interact with environmental chemical exposures to produce health inequalities. In collaboration with communities and scientists, Dr. Morello-Frosch has also developed science-policy tools for assessing the cumulative impacts of chemical and non-chemical stressors to improve regulatory decision-making and advance environmental justice.
- **Dr. Colette “Coco” Auerswald**, professor of Community Health Sciences and a pediatrician with over 20 years' experience in the clinical care of marginalized youth, is co-director of i4Y (Innovations for Youth), a cross-disciplinary, innovative research hub addressing issues of youth equity through collaborative research, training, and community engagement. Her research consistently focuses on the social determinants of health of our society's most disadvantaged youth and on structural interventions to positively impact on their health employing a community collaborative and youth-engaged approach.
- The international work of **Dr. Eva Harris**, professor of Infectious Diseases and Vaccinology, focuses on laboratory-based and epidemiological studies of dengue, chikungunya, and Zika—as well as influenza and COVID-19—in endemic Latin American countries, particularly in Nicaragua where she has maintained close collaborations for over 30 years. Ongoing projects in Nicaragua include clinical and biological studies of severe dengue, a pediatric cohort study and household transmission studies of dengue, Zika, and chikungunya in Managua.



- An engineer by training, **Dr. Laura “Leyla” Kwong**, assistant professor of Environmental Health Sciences, uses human-centered design principles to develop engineering interventions that address public health issues in low-income countries, particularly issues related to air pollution and infectious diseases, with a special focus on children. As part of her extensive fieldwork, Dr. Kwong has lived and worked with project partners in Bangladesh, Indonesia, China, Mongolia, Peru, and Uganda.

Several faculty members have also had employment experience in practice settings outside of academia. For example, our dean Michael C. Lu was formerly the director of the Federal Maternal and Child Health Bureau during the Obama Administration, where he led the transformation of key federal programs in MCH and helped launch major national initiatives to reduce maternal, infant, and child mortality in the United States. He taught a microcourse on leading change last spring, and has guest lectured on programs and policies to reduce maternal mortality in our MCAH courses.

Many divisions and programs also employ practice-based adjunct faculty and lecturers to complement our teaching program. For example, Anthony Iton, vice president of the California Endowment, has co-taught our course on advocacy with Harry Snyder, lecturer in health policy and management at the school, who also served as senior advocate of Consumers Union's West Coast office.

In 2021, the school launched the changemaker initiative to equip our students with the knowledge, tools, skills, and competencies they need for leading organizational, systems, community, societal, and global change. Four microcourses were taught: Leading Change by Dean Michael C. Lu; Community Organizing by Dr. Meredith Minkler and her community partners; Public Health Communication by Dr. Lori Dorfman and colleagues; and Public Health Advocacy by Harry Snyder. This year, we will add two additional microcourses on public health law, recognizing the importance of leveraging legislative and judicial tools to tackle political determinants of health. These microcourses exemplify our school's commitment to strengthen practice-based training and integration of our practice-based faculty.

**(2) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Plans for Improvement: We are in the process of recruiting a senior executive dean for practice & chief social impact officer who will help lead our school's social impact to the next level. An important role of the new senior executive dean for practice & chief social impact officer will be to expand our practice-based faculty, curriculum, and student experience, and assure greater integration of our practice-based faculty into our teaching program.

---

### E3. Faculty Instructional Effectiveness

---

**The school ensures that systems, policies, and procedures are in place to document that all faculty (full-time and part-time) are current in their areas of instructional responsibility and in pedagogical methods.**

**The school establishes and consistently applies procedures for evaluating faculty competence and performance in instruction.**

**The school supports professional development and advancement in instructional effectiveness.**

- (1) Describe the school or program's procedures for evaluating faculty instructional effectiveness. Include a description of the processes used for student course evaluations and peer evaluations, if applicable.**

Faculty evaluation of pedagogy is a key aspect of the regular faculty review process as outlined by campus and universitywide guidelines in the academic personnel manual (APM); as a public university, this process is transparent and standardized. Faculty undergo regular merit evaluations every two to three years (depending on rank) as well as intermittent evaluations for promotion to specific "threshold steps" (to associate and full professor, professor step 6, and professor, above scale). Each of these evaluations contains a detailed description of teaching in both quantity and quality. Teaching review input may come from a variety of sources depending on the specific action: student class evaluations, former students, the Committee on Teaching Excellence, a school ad hoc committee (for threshold cases) and the Academic Personnel Committee. The associate dean for academic affairs is responsible for the final report that is submitted to a campus-level review.

All faculty evaluations include a summary of the student evaluations for the review period. The student evaluations are conducted on a course by course basis. Prior to Fall 2022, students evaluated each course at the end of the semester by responding to the following questions:

1. Considering both the limitations and possibilities of the subject matter and the course, how would you rate the overall effectiveness of this course? (course effectiveness)
2. Considering both the limitations and possibilities of the subject matter and the course, how would you rate the overall effectiveness of this instructor? (instructor effectiveness)
3. How well did the instructor engage respectfully with ALL the students, and the students' values and priorities presented in class? (instructor engagement)
4. We define CLIMATE as current attitudes, behaviors, and standards held by faculty, staff, and students concerning the access for, inclusion of, and level of respect for individuals. How comfortable were you with the climate in this class? (class climate)

Starting Fall 2022, students will evaluate each course at the end of the semester by responding to the following questions. Questions 1 through 3 are new mandatory campuswide questions:

1. The instructor's lectures, facilitation of classes, and/or office hours and help sessions enhanced my learning. ("Learning" may include gaining mastery of course content and new skills, exposure to new methodologies and modes of critical thinking, and extending the ability to express oneself on the topics treated in the course.)
2. The assignments were well designed to help me understand the course material and gain a deeper perspective on the subject.
3. The instructor created an environment in which I could feel included (for example, encouraged multiple voices/perspectives, welcomed questions and critiques, responded to student feedback).

4. Considering both the limitations and possibilities of the subject matter and the course, how would you rate the overall effectiveness of this course? (course effectiveness)
5. Considering both the limitations and possibilities of the subject matter and the course, how would you rate the overall effectiveness of this instructor? (instructor effectiveness)
6. How well did the instructor engage respectfully with ALL the students, and the students' values and priorities presented in class? (instructor engagement)

A rating scale of one to seven (seven being the highest rating) is used for each question and a comment box is provided to capture free-form feedback from students. Evaluations are completed online by students and are anonymous. In addition, instructors have the ability to add any additional questions they would like included for their particular course (custom questions).

The school's committee on teaching excellence (CoTE) provides an award/acknowledgement of teaching excellence each semester for faculty meeting specified criteria: >70% response rate, >5 students enrolled, and course and instructor effectiveness mean and median scores above 6.0.

Instructors receive a summary report of the student evaluations at the end of the semester after grades have been submitted. Division heads also can access student evaluations for all instructors in their divisions. Each semester, our director of education operations flags courses that may require attention: courses that have at least two instances of course evaluation scores  $\leq 4$ . When a pattern of low instructional performance is identified, the education operations team reaches out to the division chair to ask for a plan for remediation.

The student evaluations are accompanied by data and evaluations comparing the faculty member's performance in relation to peers. The importance of the faculty member's contributions, especially in relation to the program curriculum, is also noted, as well as any innovative teaching methods and courses. These evaluations are provided to faculty members prior to their submission to campus for review.

**(2) Describe available university and programmatic support for continuous improvement in teaching practices and student learning. Provide three to five examples of school or program involvement in or use of these resources. The description must address both primary instructional faculty and non-primary instructional faculty.**

All UC Berkeley School of Public Health instructional faculty are expected to stay current in their area of teaching as well as keep pace with changes in educational technology and anti-racist pedagogy. To these ends, primary and non-primary instructional faculty alike are supported by university and schoolwide programming to ensure innovative and effective classroom instruction. Key areas of instructional support are described below along with examples of recent faculty utilization of available resources.

*University Support: Center for Teaching and Learning (CTL)*

CTL partners with all campus instructors to inspire, enrich, and innovate UC Berkeley's collective teaching and learning community. CTL programs and services are informed by the idea that effective teaching is learned and improved over time. CTL provides teaching support across the continuum to any member of the UC Berkeley community interested in developing and enhancing their skill set. Below are some examples of CTL sponsored opportunities related specifically to classroom instruction in which public health faculty often participate:

## Teaching Resources and Best Practices

---

- [Promoting an Equitable and Inclusive Learning Environment](#)
- [Keep Teaching](#)
- [Academic Innovation Studio \(AIS\)](#) brings together faculty, researchers, graduate student instructors, and service providers to inspire and support experimentation, connect people, and share ideas.
- Examples of past teaching [workshops](#)

## Fostering Community Around Teaching

---

- [Teach-Net](#) is a moderated email forum for exchanging information, advice, tips, and general talk concerning teaching at UC Berkeley. Subscription is restricted to UC Berkeley faculty and staff.
- [Berkeley Faculty Link Program](#) is a faculty-led program designed to build connections and community across campus through events, career mentoring, and support.

## Formal Faculty Teaching Programs

---

- [Presidential Chair Fellows Grant Program](#): This program provides an opportunity for a team of two or more faculty members from a department to develop, improve, transform, and examine core areas of the undergraduate learning experience. The grant is a means to engage in a systematic, forward-looking curriculum project expected to render fundamental and breakthrough ideas which will enhance and transform undergraduate education at UC Berkeley. For the upcoming grant cycle, we are especially interested in supporting projects that address a specific opportunity for fostering equity, inclusion, and community(e.g., projects that implement inclusive teaching strategies, culturally responsive approaches to course (re)design, or equitable grading methods) but will consider any and all projects for course (re)design.
- The [Lecturer Teaching Fellows](#) program at UC Berkeley provides lecturers with an exceptional opportunity to work individually, or in teams, to build teaching and learning tools, templates, and resources for both their individual courses and the entire campus community. The program supports fellows in generating dynamic tools and resources for enriching and/or innovating teaching practices on campus.
- [New Faculty Foundations](#) is a year-long educational and professional development program to support a new faculty as they transition to the campus, success as a faculty member, and overall well-being at UC Berkeley.

### *UC Berkeley School of Public Health support:*

The school has a team of four instructional designers that support the online/distance education programs and are available to lead workshops and support instructors. Below are some examples of School of Public Health–sponsored opportunities related specifically to classroom instruction in which school faculty often participate:

#### **Teaching Resources and Best Practices**

- An Instructional Resiliency Pedagogy Project was initiated in the summer of 2020 after campus closures due to regional wildfire activity (Fall 2019) and the COVID-19 pandemic (Spring 2020). The school's experience with online learning and its staff of instructional designers were available to assist instructors make this early transition and adapt classes to remote learning and ensure ADA compliance. It was also an opportunity to employ state-of-the-art technology more broadly across the curriculum and rethink course pedagogy to increase access for more students and create inclusive and equitable learning environments.

This project was a major step to innovate teaching pedagogy and apply universal design to 100 courses offered in Fall 2020. Similar work was done for Spring 2021. Overall, the project created collaborations between faculty and students with support from the instructional designers to better connect learning to public health practice, current public health challenges, and their professional goals.

#### **Fostering Community Around Teaching**

---

- Teaching Town Halls were established in January 2022 as small group instructional feedback sessions several times a semester. Teaching Town Halls are formative 45-60-minute interactive sessions designed around current teaching trends and challenges. Teaching Town Halls feature instructional design support as well as resources from campus.

#### **Formal Faculty Teaching Programs**

---

- The [Anti-Racist Faculty Pedagogy Academy](#) was established in the summer of 2021 with the goal to develop an initial cohort of anti-racist champions to lead in anti-racist curricular transformation at the UC Berkeley School of Public Health and commit to an ongoing practice of anti-racist pedagogy. It was recognized that faculty need the skills for practicing anti-racist pedagogy inside and outside of the classroom and advancing an effective anti-racist and racial justice curriculum. The inaugural academy was completed by 53 participants representing both PIF and non-PIF faculty. In 2022, the academy enrolled 42 faculty in the academy, again a mixture of both PIF and non-PIF. The academy includes five interactive weekly workshops that occur as a summer intensive from May through June followed by drop-in community of practice learning labs. Learning labs are open to all faculty that have participated in the intensive workshops.

**(3) Describe means through which the school or program ensures that all faculty (primary instructional and non-primary instructional) maintain currency in their areas of instructional responsibility. Provide examples as relevant. This response should focus on methods for ensuring that faculty members' disciplinary knowledge is current.**

All course syllabi are regularly reviewed for currency in disciplinary knowledge. They are discussed when first proposed and when any changes are made to the course by faculty. Review begins in the division where the faculty proposing the course has their appointment (PIF) or affiliation (non-PIF). Within the division, successful review establishes that the course proposal meets the appropriate level of learning outcomes, competency depth and assessment (graduate, undergraduate), includes relevant topics, and that readings are current and reflect diverse voices. Upon successful review at the division level, the course proposal is reviewed by the Education Policy and Curriculum Committee. Once approved, courses are submitted to the University Committee on Curriculum and Instruction (COCI) for review and approval.

All part-time lecturers (non-PIF faculty) are also reviewed on a schedule outlined by the lecturer contract, culminating in an excellence review after the 12th term (sixth year) of teaching. This review includes content expertise and currency of course resources.

Courses taught by PIF faculty are reviewed annually during curriculum planning by their division chair and discussed at division curriculum planning meetings.

**(4) Describe the role of evaluations of instructional effectiveness in decisions about faculty advancement.**

Along with scholarship and service/professional activity, instructional effectiveness is one of the three areas of faculty evaluation as outlined above. Faculty at UC Berkeley are expected to demonstrate excellence in all three areas of activity. In addition to the review of instructional effectiveness that is a part of every regular review, those faculty being reviewed for threshold advancement have summaries of their performance made available to their peers that are then discussed at a schoolwide faculty meeting at which peers provide input into teaching evaluations that becomes part of the official documentation of the academic action. These cases are also subject to a schoolwide vote, following which the dossier is reviewed for excellence at the campus level. Teaching effectiveness, as documented above, is a crucial part of each of these steps in evaluation.

- (5) Provide quantitative and/or qualitative information that characterizes the unit's performance over the last three years on its self-selected indicators of instructional effectiveness. Select at least three indicators, meaningful to the unit, with one from each of the listed categories.**

#### **Faculty Currency**

*External reviews of proposed or existing courses or curricula, outside of normal university processes*

The charge of the Changemakers External Task Force includes defining “changemaker” in public health and defining core competencies for a public health changemaker among the current CEPH competencies and additional complementary, advanced competencies. As detailed in Section F1, faculty and staff have taken the recommendations of the Changemakers External Task Force for changemaker vision, definition, and skills/competencies, and developed specific plans to implement them.

The Educational Policy and Curriculum Committee reviews on average 20-30 course proposals per academic year roughly representing 10-12% of the school's curriculum. Course syllabi are reviewed for readings, topics, and assessment methods any time a course is submitted for changes, including changes to course title and/or course description.

#### **Faculty Instructional Technique**

*Student satisfaction with instructional quality*

Students complete course evaluations at the end of each semester. The course evaluation asks students to rate instructor effectiveness from one to seven (seven being the highest rating) with the question: “Considering both the limitations and possibilities of the subject matter and the course, how would you rate the overall effectiveness of this instructor?” Data since summer 2020 show an average mean instructor effectiveness score of 6.30 and average median instructor effectiveness score of 6.59 for faculty, and an average mean instructor effectiveness score of 6.31 and average median instructor effectiveness score of 6.72 for GSIs.

**Table E3.5.1 Average of Instructor Effectiveness Scores**

Semester	Average of Instructor (Faculty) - Mean	Average of Instructor (Faculty) - Median	Average of Instructor (GSI) - Mean	Average of Instructor (GSI) - Median
Summer 2020	6.32	6.78	6.25	6.60
Fall 2020	6.30	6.56	6.35	6.74
Spring 2021	6.26	6.50	6.31	6.70
Summer 2021	6.25	6.57	6.28	6.78
Fall 2021	6.35	6.64	6.26	6.72
Spring 2022	6.25	6.38	6.22	6.64
Summer 2022	6.30	6.66	6.29	6.70
Fall 2022	6.39	6.66	6.49	6.88
<b>Running Avg</b>	<b>6.30</b>	<b>6.59</b>	<b>6.31</b>	<b>6.72</b>

**School- or Program-Level Outcomes***Teaching assistants trained in pedagogical techniques*

UC Berkeley requires that all first-time graduate student instructors (GSIs) fulfill the following requirements related to pedagogical techniques:

1. Attend the First-Time GSI Teaching and Resource Center Conference
2. Complete the GSI Professional Standards & Ethics Online Course
3. Either have completed or be enrolled in a 300-level (professional development) pedagogy seminar

To comply with the 300-level pedagogy seminar requirement, GSIs for the School of Public Health may take PB HTLH 375: School of Public Health Schoolwide Pedagogy Course or a 300-level pedagogy seminar offered by another campus department and approved by the SPH Head Faculty Advisor for GSIs. In particular, PB HTLH 375 provides skill development and professional preparation for GSIs, specifically preparing for and leading discussion sections, designing writing prompts, preparing and creating problem sets, working with students one-on-one, grading students' writing and exams, self-assessment, developing a course syllabus, and using technology in public health classes.

Students being considered for a GSI position complete an eligibility form in which they attest to having been informed about the policies for the appointment and meeting the criteria for the appointment, including fulfillment of the pedagogy requirements. SPH communicates campus' requirements for GSIs via bi-annual emails from the SPH Head Faculty Advisor for GSIs and emails from hiring coordinators. The eligibility form and updated academic student employee hiring processes were implemented in 2021 as part of an initiative to establish standardized hiring processes and ensure student compliance with campus policies.

Documentation is available in ERF E3.5.



**(6) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Instructional effectiveness is one of the top strengths of Berkeley Public Health. It starts with an extraordinarily gifted faculty of all series and ranks who are passionate about teaching and dedicated to student learning. Both the university and the school provide ample resources (e.g., Center for Teaching and Learning; instructional designers) to upskill faculty teaching. Over the past three years, the school has launched a number of initiatives to drive continuous quality improvement (e.g., pulse surveys, teaching town halls) and pedagogical innovations (e.g., Anti-Racist Pedagogy Faculty Leadership Academy). The consistently high-ratings that our instructors receive from our students is a testament to the strength of our instructional effectiveness.

Plans for Improvement: The work of improving instructional effectiveness, of course, is never finished. We will take a continuous quality improvement approach to improving and innovating our teaching and learning, using real-time data to drive real-time improvement. We still have work to do to make our curriculum and pedagogy more anti-racist, and there are still a few areas for improvement in teaching leadership competencies.

---

## E4. Faculty Scholarship

---

**The school has policies and practices in place to support faculty involvement in scholarly activities. As many faculty as possible are involved in research and scholarly activity in some form, whether funded or unfunded. Ongoing participation in research and scholarly activity ensures that faculty are relevant and current in their field of expertise, that their work is peer reviewed and that they are content experts.**

**The types and extent of faculty research align with university and school missions and relate to the types of degrees offered.**

**Faculty integrate research and scholarship with their instructional activities. Research allows faculty to bring real-world examples into the classroom to update and inspire teaching and provides opportunities for students to engage in research activities, if desired or appropriate for the degree program.**

**(1) Describe the school or program's definition of and expectations regarding faculty research and scholarly activity.**

Evaluation of faculty scholarship proceeds via principles outlined in the universitywide Academic Personnel Manual with application to our school. Superior intellectual attainment is the fundamental metric guiding faculty evaluation. Faculty scholarship is expected to show evidence of creativity, excellence, and impact. As discussed below, there is no single indicator of these criteria but a wide range of information is taken into account in holistically evaluating faculty research (see section E4.5). Public health faculty perform research in many different areas using a wide range of methods, so there is no "one size fits all" rubric for faculty evaluation. All information about scholarship is assembled at the time of faculty review, and it is expected to show evidence of excellence and productivity to support advancement as well as impact on knowledge and/or practice that address the public health needs of society.

**(2) Describe available university and school or program support for research and scholarly activities.**

UC Berkeley offices have specific roles in the support of campus research:

Sponsored Projects Office (SPO)

SPO is responsible for reviewing and authorizing proposals for submission and for interpreting, negotiating, and accepting contracts and grants for sponsored projects funded by federal and state agencies, foundations, and other public and private sources.

Berkeley Research Development Office (BRDO)

BRDO provides a range of services focused on bringing more research funding to campus while decreasing the faculty burden in applying for it. Services include:

- Helping faculty find relevant funding opportunities for their research,
- Working directly with faculty and teams to support effective proposal writing and development,
- Developing and curating written guides and tips for to proposal writing,
- Providing periodic proposal-related training for faculty and postdoctoral researchers, and
- Working with other offices and institutions to overcome problems that may arise during the proposal process.

### Contracts and Grants Accounting

CGA is primarily responsible for billing and cash collections throughout the life of the sponsored project as well as award closeout. Financial and accounting services include: award setup in UC Berkeley's financial systems, financial reporting and analysis, invoicing, accounts receivable collections, cash management, audit coordination, effort report coordination, campuswide training, and technical assistance.

### Berkeley Regional Services: Professional Schools Region (ProS)

UC Berkeley provides administrative support to schools through a centralized platform called Berkeley Regional Services. The School of Public Health is part of the The ProS Region which services all of the professional schools on campus. ProS provides research administration, HR, and purchasing support for PIs during pre-award, post-award, and closeout of contracts and grants. Pre-award and post-award services include:

- Developing budgets and all administrative documents for research proposals in collaboration with the PIs, and preparing complete proposals for submission to the Sponsored Projects Office and the sponsor,
- Managing contract and grant (C&G) and non C&G funding, including setting up budget allocations for new C&G funds; processing all academic, summer, student, and staff salary funding entries; setting up and monitoring subawards; processing faculty salary research exchange requests; approving all reimbursements and purchases (over \$75); monitoring all funds to ensure transactions have posted correctly (making corrections as necessary); providing monthly reports for all funds (including spending projections); assisting with progress reports (including verifying committed effort for personnel); and closing all C&G funds at the end of the project period,
- Acting as liaisons between the School of Public Health and other campus partners (for example the Sponsored Projects Office and Contract and Grant Accounting) for all of the above processes, and
- Maintaining records in compliance with institutional and sponsor policies.

Sixteen staff members from the ProS Region support the school. Eleven of these are 100% committed to the school and five also support the other professional schools at UC Berkeley. There are four pre-award research administrators (who also support the other professional schools on campus), 10 post-award research administrators, and two contracts and grants research administration supervisors (one of the supervisors works with both the pre- and post-award team).

Within the School of Public Health, support of research activities is led by the associate dean of research (ADR) and director of research development (DRD). The ADR and DRD provide grant development support by identifying and communicating about funding opportunities and deadlines, conducting grant writing workshops, and providing one-on-one grant writing consultations to help with proposal development, strategy, and planning. Trainings, information sessions, and resource documents are also provided on research management. The DRD ensures that the school community is informed about currently funded research and recent publications by faculty and researchers through events, emails, and website updates. The ADR oversees research policy and regulatory compliance, supported by the DRD who is responsible for maintaining consistent and timely departmental approvals for proposals. Additionally, the ADR and DRD promote and coordinate the collaborative research of faculty and researchers within the school, across UC Berkeley, with other UC campuses, and with other research partners outside of UC Berkeley and the University of California. The DRD specifically focuses on large, complex grants such as training grants and center grants as well as supporting new faculty as they launch their first grants. The ADR and DRD have developed extensive proposal development resources on the school website including an internal review of specific aims, an external review of grant proposals before they are submitted, and a repository with examples of funded projects for new faculty to view to help them develop their grant writing skills.

**(3) Describe and provide three to five examples of student opportunities for involvement in faculty research and scholarly activities. This response should focus on instances in which students were employed or volunteered to assist faculty in faculty research projects and/or independent student projects that arose from or were related to a faculty member's existing research.**

- **Dr. Timothy Brown** (Health Policy and Management) included undergraduate students from the Undergraduate Research Apprenticeship Program (URAP) in three projects. These students have been valuable members of each research team. Project 1: FUTUREPAIN: Randomized Controlled Trial to Test an Online Mind-Body Intervention for Chronic Pain and Whether Racial-Ethnic Concordance Affects Outcomes. Research team included four to five undergraduate students, depending on the semester. Project 2: The Causal Effect of High-Quality Physician-Patient Relationships on Healthcare Costs and Outcomes: Differences by Race/Ethnicity and the Effect of Racial/Ethnic Concordance. Research team included five undergraduate students. Project 3: Suicide Prevention Among College Students Before and During the COVID-19 Pandemic: Systematic Review and Meta-analysis. Research team included four to five undergraduate students, depending on the semester.
- Every year **Dr. Emily Ozer** (Community Health Sciences) has an approximately 10-person lab of graduate students and undergraduate research apprentices through the YEDI (Youth Equity Discovery Experience) and URAP programs who engage in data collection and technical support for youth-led participatory action research (YPAR) classes in the San Francisco Unified School District. These students work in person and/or remotely with groups of high school students to support their work in improving equity and health at their schools, and to gather data regarding those efforts.
- **Dr. Arthur Reingold** (Epidemiology) has collaborated closely since 1994 on the CDC-funded California Emerging Infections Program (CEIP) with the California Department of Public Health and four San Francisco Bay Area county/local health departments (San Francisco, Alameda, and Contra Costa counties and City of Berkeley). The program, which currently receives over \$6 million in annual funding from the CDC, conducts active, population-based surveillance for diverse infectious diseases (e.g. influenza, food borne illnesses, COVID-19, diverse bacterial infections, and healthcare associated infections), together with numerous epidemiological studies of risk factors, effectiveness of prevention and control strategies, and molecular studies of the etiological agents. Under Professor Reingold, UC Berkeley School of Public Health students, including MPH, DrPH, and PhD students from diverse programs, work as student interns at CEIP, assisting with data collection, analysis, and interpretation, and often developing their required "capstone" project using data from CEIP. For example, in 2021-22, two MPH students in the 11 month epidemiology track analyzed CEIP data concerning fungal and bacterial infections, respectively, for their capstone papers. As paid staff positions working at CEIP and at the collaborating public health departments become available, these students often compete successfully for full-time paid positions, based on their didactic and field experience.
- The Center for Healthcare Organizational and Innovation Research (CHOIR), led by **Dr. Hector Rodriguez** (Health Policy and Management), and the Center for Lean Engagement and Research (CLEAR), led by **Dr. Dorothy Hung** (Health Policy and Management), have involved undergraduate, graduate, and PhD students in their research. Almost all of the students have been authors on peer-reviewed papers and in some cases have been the lead authors.

- **Dr. Meg Schwarzman** (Environmental Health Sciences) hired two master's students as GSRs as part of a four-year research project funded by UCOP's California Breast Cancer Research Program that involved collaborators at the Silent Spring Institute and Berkeley Law. The project investigated the impact of Proposition 65 on Californians' exposure to carcinogens and reproductive/developmental toxicants. One student performed background policy research, analyzing (among other things) toxic emissions reported under California's Hot Spots program. The student applied that analysis to his capstone project, and it translated directly into his interest in environmental law (he is now pursuing a JD at Berkeley Law with a focus on environmental law). The second student performed complex data analysis in R for an investigation of the impact of California's rules targeting diesel exhaust. In collaboration with scientists at the California Air Resources Board, the group published that analysis in the journal *Science* with the student as second author.
- **Dr. Charlotte Smith** (Environmental Health Sciences), whose research interests include impact assessment and evaluation of water systems and public health in urban and rural Mexican communities, mentored three students for their MPH practicum in Jalisco, Mexico. The project explored the social, occupational, and environmental factors associated with diarrheal disease and kidney disease in three rural indigenous communities. The students were involved with IRB approvals, designed and implemented a mobile-phone GPS-enabled household survey, and collected and analyzed drinking water samples. Their work was published in the *International Journal of Environmental Research and Public Health*. The students have gone on to successful careers.
- **Dr. Jay Graham** (Environmental Health Sciences) funded three MPH students to conduct a study of antimicrobial resistant Enterobacterales in people and pets in San Francisco. He also mentored an MS student who is conducting a study of urinary tract infections associated with exposure to contaminated recreational waters in Santa Cruz, California. He funded two GSRs to travel overseas (one to Ecuador and one to Guatemala) to conduct One Health research that aims to characterize the role of animals and the environment in transmitting drug resistant bacteria to humans.

**(4) Describe and provide three to five examples of faculty integrating research and scholarly activities and experience into their instruction of students. This response should briefly summarize three to five faculty research projects and explain how the faculty member leverages the research project or integrates examples or material from the research project into classroom instruction. Each example should be drawn from a different faculty member, if possible.**

- **Dr. Timothy Brown** (Health Policy and Management) integrated examples from many of his published articles into PB HLTH 231A: Analytic Methods for Health Policy and Management to demonstrate in detail how to apply the techniques being taught. Some of these published articles were those that had been published with past students of PB HLTH 231A (these publications were expanded versions of class research projects) in order to demonstrate how what was being taught in the course could be applied immediately.
- Building on **Dr. Emily Ozer's** (Community Health Sciences) longstanding research partnership with the San Francisco Unified School District and San Francisco Peer Resources, five students in PB HLTH 219C: Community-Based Participatory Research engaged in a practicum to provide technical assistance to groups of students at Lowell High School in San Francisco who were working on issues of racism as well as sexual harassment and sexual violence at their school.

The UC Berkeley students supported survey development, analysis, and interpretation of the research projects led by the high school students. This is an ongoing practicum with SF Peer Resources that is part of the CBPR class.

- In PB HLTH 270A: Exposure Assessment and Control, **Dr. Joshua Apte** (Environmental Health Sciences) assigned an individual term paper research project. Two high-profile papers have resulted from the Fall 2020 cohort of PB HLTH 270A. In a *PNAS* paper authored by student Yutong Liang and others student researchers harvested data from thousands of low-cost air pollution sensors in California to illustrate how wildfire smoke infiltrates into California homes (<https://www.pnas.org/doi/10.1073/pnas.2106478118>). In a second paper authored by student Haley Lane and coauthors, the authors combined a high-resolution air pollution model with maps of historical redlining to illustrate how neighborhoods who suffered redlining discrimination in the 1930s continue to experience higher-than-average air pollution levels today in hundreds of U.S. cities. (<https://pubs.acs.org/doi/abs/10.1021/acs.estlett.1c01012>). This second paper has been extensively covered in the news media, including the *NY Times*, *Washington Post*, and *The Guardian*.
- **Dr. Jay Graham** (Environmental Health Sciences) regularly provides students with real environmental health data (e.g., particulate matter/air quality data and drinking water quality data) for students in PB HLTH 200K: Environmental Health Sciences Breadth Course to work with. He uses these data to provide students with real problems and augment their skills in conducting analyses, which include conducting calculations to determine the mean, median, mode, confidence intervals, prevalence ratios, etc.

#### **(5) Describe the role of research and scholarly activity in decisions about faculty advancement.**

The frequency and timetable for evaluation of faculty scholarship is dictated by the University Academic Personnel Manual and occurs simultaneously with evaluation of teaching and other contributions. Assessment of faculty scholarship is not simply enumerative, but evaluative. Information about the faculty member's contributions come from a self-statement, curriculum vitae, record of publication, and for threshold cases, extramural peer review.

As noted, faculty contributions are expected to show evidence of superior intellectual attainment and excellence. There are many ways in which these contributions are assessed: (1) Publication record, including the impact of the work and the quality of the publication venue; (2) Invitations to deliver lectures; (3) Prizes and awards; (4) Extramural grant funding; and (5) Contributions to diversity, equity, and inclusion. A particular area of discussion in the school has been the review of faculty involved in community-engaged research, i.e., partnerships with groups that are not traditionally academic. Led by Professor Emily Ozer (Community Health Sciences; co-Chair of the Academic Personnel Committee), and supported by Dean Michael Lu, other campus deans, the Berkeley Academic Senate, and the Vice Provost for the Faculty, new campus guidelines were established in 2021 that clarify that non-peer reviewed scholarship intended for policy and practice impact (e.g. white papers, briefs) are credited as scholarship rather than service. Since these guidelines were established, Professor Ozer, the Dean's office, and the Academic Personnel office have collaborated to develop accompanying models for outside solicitation letters that recognize these guidelines as well as campus guidelines regarding the valuing of diversity and equity efforts in faculty evaluation. We are the first UC and to our knowledge one of the first research-intensive campuses in the country to establish guidelines for the crediting of community-engaged scholarship in our research portfolios.

Because of the breadth of scholarship in the school, input into the evaluations comes from multiple sources. At the time of merit review, faculty peers are called upon to assess the quality of the candidate's research program and this information is incorporated into the final summary prepared by the associate dean of faculty affairs. These evaluations crucially take into account the novelty, creativity, and impact of the work on the faculty member's field; as noted above, the social impact of the work is also taken into account. For threshold cases an ad hoc committee is assembled that has expertise in the faculty member's discipline. This committee prepares a report that is reviewed by the faculty prior to a schoolwide vote and transmittal to the campus for review. These threshold cases/promotions often require extramural letters from peers. Neither standard merit reviews nor promotions are considered "routine"; all require substantial documentation taking into account the information summarized above.

- (6) Provide quantitative data on the unit's scholarly activities from the last three years in the format of Template E4-1, with the unit's self-defined target level on each measure for reference. In addition to at least three from the list that follows, the school or program may add measures that are significant to its own mission and context.

**Table E4.6.1 Outcome Measures for Faculty Research and Scholarly Activities**

Outcome Measure	Target	Year 1 CY 2019	Year 2 CY 2020	Year 3 CY 2021
Percent of faculty (total faculty) participating in research activities*	90%	90%	90%	93%
Total research funding**	\$40M	\$86.2M	\$49.7M	\$59.5M
Number of grant submissions	200	274	296	227
Grant success rate***	30%	43%	47%	46%

\*For this metric, we included all ladder-rank faculty, professor-in-residence faculty, and adjunct faculty (n=96).

\*\* Our total research funding includes all contracts and grants received in a given calendar year. Research gifts are not reflected in these numbers. When a multi-year grant is awarded, the full amount is recorded in the year it was received (for all years of the grant). In 2019, we were fortunate to receive four large federally funded center grants that elevated the amount of funding received that year.

\*\*\* Success rate in 2021 may change slightly once we hear back from the funding agencies about the grants awaiting decision.



**(7) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths. By all measures, UC Berkeley School of Public Health faculty and researchers have been highly successful in their research and scholarly activities. One such metric is our faculty's spectacular grant success rate, which exceeds 40%. A robust process to assess the impact of the research is used to inform decisions about merits and promotions. Students have ample opportunity to engage with research, both through classroom activities and in individual engagement with faculty research projects. Additionally, junior faculty receive individualized support for proposal development and strategic planning related to research funding. The full-time director of research development position was established in 2016; the scope of this role includes one-on-one meetings with junior faculty to discuss funding opportunities, strategic planning for proposal development, and editing of proposals. In addition, junior faculty can take advantage of many research resources aimed at improving grantsmanship including a grant-writing group, a funded grant repository, and an internal peer review of specific aims.

Weaknesses: The significant drop in C&G in the past two years was anticipated given the generational transition of our faculty, more senior faculty with large grant portfolios retiring and being replaced by junior faculty who are just starting out on their research career. We anticipate this trend to reverse as our new crop of junior faculty, under the support of our ADR and junior faculty mentoring program, becomes more established in research funding.

Plans for improvement: As a large public university, research administration processes are centralized and can at times be cumbersome and bureaucratic. The area in which we can most substantially improve in the research space is in streamlining research administration, an effort that must engage the UC Berkeley campus overall. Some pilot activities to streamline grants administration are in discussion between the ProS region and the relevant offices on campus. Furthermore, the new executive vice chancellor and provost at UC Berkeley has "bureaucracy busting" as a top priority. The School of Public Health will engage with and support these efforts, and we anticipate improvements in coming years.

---

## E5. Faculty Extramural Service

---

The school defines expectations regarding faculty extramural service activity. Participation in internal university committees is not within the definition of this section. Service as described here refers to contributions of professional expertise to the community, including professional practice. It is an explicit activity undertaken for the benefit of the greater society, over and beyond what is accomplished through instruction and research.

As many faculty as possible are actively engaged with the community through communication, collaboration, consultation, provision of technical assistance and other means of sharing the school's professional knowledge and skills. While these activities may generate revenue, the value of faculty service is not measured in financial terms.

**(1) Describe the school's definition and expectations regarding faculty extramural service activity. Explain how these relate/compare to university definitions and expectations.**

Extramural service, sometimes including evidence of professional accomplishment, is another of the three areas of faculty evaluation according to the timetable and methods reviewed above. Service accomplishments are highly valued by the university, campus, and school, and evaluations take into account service at the level of the school, campus, university, and profession. Engagement in extramural service is expected of all faculty as a reflection of commitment to the values of the school to improve the health and welfare of all the communities with whom we collaborate and serve. This service can take multiple forms requiring in-depth evaluation (see E.5.5), and may reflect professional service, efforts to improve public health, participation in community programs, policy development, outreach, and support of diversity, equity and inclusion. Service usually reflects a faculty member's creative interests and may entail dissemination of new research findings to affected communities as well as community-engaged scholarship.

**(2) Describe available university and school support for extramural service activities.**

The university and school provide support to extramural service activities in varying ways by providing:

- Full salary support for our ladder-rank faculty to be able to conduct teaching, research, and service (which includes extramural service activities),
- A director of research development who helps identify funding opportunities that support service-oriented or community-based initiatives; we are also recruiting a senior executive dean for practice & chief social impact officer who will help facilitate faculty extramural service activities for collective social impact, and
- Pre- and post-award personnel and a business contracts office that can help administer contracts and grants related to community-based initiatives.

**(3) Describe and provide three to five examples of faculty extramural service activities and how faculty integrate service experiences into their instruction of students. This response should briefly summarize three to five faculty extramural service activities and explain how the faculty member leverages the activity or integrates examples or material from the activity into classroom instruction. Each example should be drawn from a different faculty member, if possible.**

- In both undergraduate and graduate mental health classes (PB HLTH 84 and PB HLTH 255C) taught by **Dr. Emily Ozer** (Community Health Sciences), students have consulted with external and internal partners to take action to promote mental health. In 2020, working remotely, MPH-MSW student Caroline de Bie consulted with a new nonprofit in Alameda, California, called Gwendolyn's Light, named for the teen daughter of the founder who had taken her own life after receiving insufficient mental health support in her school and community. De Bie developed a literature review and logic model to support the planning of Gwendolyn's Light, and then volunteered after the class to work with the founder Laura Katz to develop a youth advisory board for the new nonprofit. In 2022, as part of the PB HLTH 84 undergraduate class, four students consulted with the executive and associate executive dean of the College of Letters and Science (the largest college at Berkeley) to improve student mental health and reduce stress by developing new models for undergraduate advising. The students developed a model for a new peer advising group to build off of freshman orientation, and presented their model and initial data collection to support the concept to the associate executive dean at the end of the semester. The students will continue to work with the executive deans as part of a 199 research project moving forward.
- For the last 10 years, **Kim MacPherson** (Health Policy and Management) has been on the board of trustees of a community-based hospital that services a predominantly public insurance population in San Francisco. Professor MacPherson uses that governance experience in her PB HLTH 223C: Healthcare Strategy and PB HLTH W227A: Health Care Finance courses to provide students with tangible, real-world examples of how governance bodies operate in healthcare settings and specific cases where decision accountability rises to the board level (e.g., capital investments >\$1M, hiring of new CEO/president, possible merger, etc). As current board chair, Professor MacPherson now also adds in that leadership lens and insights on what it takes to keep a governance body "healthy" and focused.
- **Dr. Charlotte Smith** (Environmental Health Sciences) advises utilities all over the world to improve water quality. For almost 30 years, she has conducted evaluations of water systems and trained water distribution system operators to find and solve water quality problems. The city of Berkeley wanted to encourage citizens to drink more water but did not have a map of public water fountains. The students in Dr. Smith's course, PB HLTH 170C: Drinking Water and Health, developed and used a mobile-phone GPS-enabled app to locate and inventory the city of Berkeley's water fountains. The students also examined whether there were disparities in the location or condition of the fountains based on the racial makeup or economic status of a neighborhood. The work was provided to the city of Berkeley's Public Works department to prioritize maintenance, and was published in *BMC Public Health* with a student as first author.

**(4) Provide quantitative and/or qualitative information that characterizes the unit's performance over the last three years on the self-selected indicators of extramural service, as specified below:**

The following service indicators are meaningful to the School of Public Health:

**1. Percent of faculty primary instructional faculty participating in extramural service activities**

Primary instructional faculty are engaged in extramural service activities locally, regionally, nationally, and internationally. Review of service is part of the merit and promotion process for faculty. The school will design and implement an annual system to collect data and report on this indicator for all primary instructional faculty.

**2. Number of community-based service projects**

Community-based projects are projects that (1) engage community partners in the delivery of the scope of work; (2) outline the facilitation of stakeholder engagement with community partners and/or the general public, as well as the dissemination of information from study findings to partners as appropriate; or (3) engage community partners as touch points for stakeholder engagement. In a September 2022 survey of faculty service activities, faculty self-reported community-based projects in which they served as consultant/advisor, primary investigator, co-investigator, or project team member. In AY 2021-2022, 130 community-based projects were reported. The school will design and implement an annual system to collect data and report on this indicator for all faculty.

**3. Number of faculty-student service collaborations**

Faculty-student service collaborations include courses and programs that have a service-learning component in which faculty have created opportunities for students to interface with community partners. In a September 2022 survey of faculty service activities, faculty self-reported faculty-student collaborations. Examples include courses such as PB HLTH 204A: Mass Communication in Public Health and PB HLTH 223C: Strategic Management in the Health Care Sector, and programs such as the Youth Equity Discovery Initiative and Berkeley Kavli Center for Ethics, Science, and the Public. In AY 2021-2022, 37 faculty-student collaborations were reported. The school will design and implement an annual system to collect data and report on this indicator for all faculty.

**(5) Describe the role of service in decisions about faculty advancement.**

Service is regularly reviewed according to the timetable prescribed by the University of California Academic Personnel Manual along with scholarship and teaching (Academic Personnel Manual website: <https://www.ucop.edu/academic-personnel-programs/academic-personnel-policy/>). As noted, service contributions to multiple different groups are valued. At the time of faculty review, information about service is gathered, and becomes part of the documentation for the academic action. Evaluation of faculty service can include: (1) Membership on committees at multiple levels including school, campus, university, and profession; academic senate committees are deemed particularly important for evaluation of senior faculty; (2) Evidence of service in peer review for academic journals and public and philanthropic granting agencies; (3) Participation in various sorts of advisory committees;

(4) Policy development and public outreach; and (5) Work supporting the university and school's efforts to ensure diversity, equity, and inclusion in all academic and professional activities.

All groups and individuals involved in faculty assessment review service contributions of candidates for advancement and promotion. This review stresses not simply the quantity of the contributions, but how much effort is entailed in the activity, and how they have had an impact on the stakeholder groups. As noted in Section E4: Faculty Scholarship, new campus guidelines were established to credit non-peer-reviewed products of community-engaged scholarship in the research portfolio for evaluation, rather than in the service category.

**(6) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Berkeley Public Health is a community in which service is a way of life for many faculty, staff, and students. There is a strong organizational culture around service, especially community-engaged actions in service of the most vulnerable in our local and global communities. At a recent faculty retreat, faculty expressed a collective desire to do more community engagement, as well as advocacy for health equity and social justice on behalf of the most vulnerable populations. The widespread national and global recognition of our faculty also means that they are serving on many scientific and policy committees, which helps extend and scale the school's social impact in the world. Many faculty integrate their service experience back into classroom teaching, which helps students understand how research is applied to advance health equity through practice and policy.

Weaknesses: We did not identify significant weaknesses with respect to faculty extramural service, other than a need for more systematic tracking of faculty service activities. Faculty attrition in the recent past had put a strain on our faculty's capacity for extramural service (despite which our faculty had remained actively engaged in service); the tremendous faculty growth in the past three years should help ameliorate that strain.

---

## F1. Community Involvement in School or Program Evaluation & Assessment

---

The school or program engages community stakeholders, alumni, employers, and other relevant community partners. Stakeholders may include professionals in sectors other than health (e.g., attorneys, architects, parks and recreation personnel).

Specifically, the school or program ensures that stakeholders provide regular feedback on its student outcomes, curriculum, and overall planning processes, including the self-study process.

- (1) Describe any formal structures for constituent input (eg, community advisory board, alumni association, etc.). List members and/or officers as applicable, with their credentials and professional affiliations.**

The School of Public Health regularly engages with stakeholders, including alumni and public health leaders, for input on strategic planning, programs, content and currency of public health curricula, and alignment of curricula with public health practice and research needs. Formal structures for input include the Public Health Alumni Association and the Dean's Advisory Board.

### **Public Health Alumni Association**

The UC Berkeley Public Health Alumni Association (PHAA) was established in 1953 to build and strengthen personal and professional relationships among public health alumni and students of UC Berkeley.

PHAA is led by a volunteer board of directors, which consists of 18 elected alumni directors, three of whom are officers; one non-elective director appointed by the dean; the dean as an ex-officio board member; and three student representatives appointed by the school's student body. In addition to regularly scheduled board meetings which occur throughout the academic year, there are several standing committees such as professional development, events and networking, scholarship and diversity, and anti-racism action.

Through the work of the board and its committees, PHAA sponsors a series of programs and activities which benefit students and promote mutual help and communication leading to the improvement in professional work among public health alumni of UC Berkeley, in concert with the mission of the The UC Berkeley School of Public Health.

Website: <https://publichealth.berkeley.edu/alumni/alumni-association/>

- **List of 2022-2023 PHAA Board Members:**
  - **Alice Chu PhD, MBA, MPH '19**, PHAA co-president, director of market access and medical marketing, Asia Pacific, for Glaukos Corporation
  - **Francesca Lomotan MPH '17, BA**, PHAA co-president, interim community health promotion unit manager at San Mateo County Health
  - **Janet Leader MPH '83**, PHAA vice-president, retired nutrition strategy and education director for the David Geffen School of Medicine at UCLA, and lecturer and associate director of field studies in the Department of Community Health Sciences at the UCLA Fielding School of Public Health
  - **John Bodtker MPH '21, PharmD, BS**, PHAA secretary

- **Sofia Andrade MPH '18, BA**, PHAA communication chair, workforce development program manager at CommonSpirit Health
- **Riya Suising MPH '20, MS, BS**, PHAA membership chair, CEO, Silicon Valley Body Renewal
- **Elizabeth Ly MPH '19**, PHAA past-resident, senior clinical affairs coordinator at the Society of Family Planning
- **Emer Braddock MPH, BA '05**, assistant director of revenue cycle optimization for the Revenue Cycle Strategy Team at UCSF Health
- **Annie Chang MS '13, MD '15**, family medicine physician
- **BingYune Chen MPH '10**, advanced analytics and machine learning algorithms leader at Vori Health
- **Jeffrey Hanson MPH '89, M.Ed., BS**, independent consultant
- **Gene Ho MPH '20, BA '19**, data scientist at the Los Angeles County Public Health Department
- **Whitney Kennedy MPH '15, BA '11**, chief of staff to Kaiser Permanente's Northern California Regional President
- **Jung G. Kim PhD '19, MPH '15**, founding faculty at the Kaiser Permanente Bernard J. Tyson School of Medicine's Department of Health Systems Science and lecturer for the UC Berkeley School of Public Health Online MPH program and clinical teaching associate at the University of Washington School of Medicine
- **Stella Ling MD, MPH '82**, retired radiation oncologist and teaching faculty at University of Miami, Sylvester Cancer Center, The Ohio State University James Cancer Center Department of Radiation Oncology, and UC Berkeley Osher Lifelong Learning Institute
- **Praneetha Mullangi BA '14**, MBA candidate at UC Berkeley's Haas School of Business
- **David Newhouse MPH '79, MD, MBA**, retired departmental chief, assistant physician-in-chief and program director for the Fremont Infertility Center at The Permanente Medical Group
- **Nihari Patel MPH, BA '13**, operations and financial manager at UCSF Cancer Center
- **Mary Russell MPH '14**, director of Medicaid Policy and Programs at Aurrera Health Group
- **Leslie Safier MPH '10**, director of performance improvement at Zuckerberg San Francisco General Hospital and Trauma Center
- **Katherine Sham BA '19**, associate consultant at Mercer
- **Bonnie Tung MBA, MS, BA '13**, healthcare strategist/product at Babyscripts
- **Juan Carlos Bordes**, first-year DrPH student representative
- **Uday Dhanda**, undergraduate public health student representative
- **Bria Larson**, first-year MPH student representative
- **Christine Youn**, undergraduate public health student representative

### **Dean's Advisory Board**

The Dean's Advisory Board was established in 1993 for the purpose of advising the dean and supporting the school in its efforts to attain the highest level of quality in professional education, research, and service in all aspects of public health.

Website: <https://publichealth.berkeley.edu/about/leadership/deans-advisory-board/>

- **List of 2022-2023 Dean's Advisory Board Members:**

- **Richard M. Levy PhD, Chair**, chairman emeritus and former CEO of Varian Medical Systems
- **Amy Bassell-Crowe PhD, MPH '13**, clinical psychologist
- **Raymond J. Baxter PhD**, former president and CEO of Blue Shield of California Foundation
- **Terry Bayer, JD, MPH**, former COO of Molina Healthcare
- **Michael E. Bird, MSW, MPH**, public health programs director for Indian Health Council
- **Jerry Cacciotti MBA**, health practice partner at A.T. Kearney
- **Margaret Cary MD, MBA, MPH**, president of The Cary Group Global and faculty at Georgetown University School of Medicine
- **Deborah "Debbie" Freund, MA, MPH, PhD**, professor in the School of Community and Global Health (SCGH) and in the Department of Economic Sciences (DPE) in the School of Social Science, Policy and Evaluation (SSSPE) at Claremont Graduate University
- **Charles Froland DrPH, MPH, MBA**, retired CEO and CIO of Performance Equity Management
- **Mark B. Horton MD**, health leadership consultant with the Center for Health Leadership and Practice at the Public Health Institute
- **Anthony B. Iton, MD, JD, MPH '97**, senior vice president of Healthy Communities at The California Endowment
- **Lauren LeRoy PhD**, strategic advisor to foundations and nonprofit organizations focused on health and policy issues and former president and CEO of Grantmakers in Health
- **Mary A. Pittman DrPH '87**, CEO and president of Public Health Institute
- **Mary Jo Potter MA**, CEO of Healthcare Angels and senior advisor at BDC Advisors
- **Kenneth Taymor JD**, executive director of the Berkeley Center for Law, Business, and the Economy at UC Berkeley School of Law
- **Barbara Sandoval Terrazas MPH '76**, director of planning, development, and policy at Tiburcio Vasquez Health Center

**(2) Describe any other groups of external constituents (outside of formal structures mentioned above) from whom the unit regularly gathers feedback.**

Examples of other groups of external constituents convened by the School of Public Health to provide input include the Changemakers External Task Force and the Community Advisory Board Planning Committee.

Changemakers External Task Force

The "Changemaker Initiative" was formed to ensure that UC Berkeley School of Public Health students are equipped with not only a world-class education in the core public health sciences, but the knowledge, tools, and skills they need to help bring about real change in the world—such as leadership and governance, communication and collaboration, strategic thinking and community organizing, policy and advocacy. As public health executives and advisors who have led and transformed large health organizations and systems, the 16 members of the Changemakers External Task Force embody changemaker values. The charge of the Changemakers External Task Force includes:

- Define "changemaker" in public health;
- Identify core competencies for a public health changemaker among the current CEPH competencies and additional complementary, advanced competencies;
- Develop a set of recommendations for curricular, pedagogical, and assessment changes for consideration, adoption, and implementation by the dean and faculty senate; and



- Create and support a strategic fund development plan and fundraising strategy to help transform Berkeley into the first changemaker school of public health in the world.

#### Community Action Board Planning Committee

The Community Action Board (CAB) Planning Committee was formed in Spring 2021 to help ensure diverse community voices are represented in the UC Berkeley School of Public Health's decision-making and goals of becoming an anti-racist institution (see project charter). The goals for a schoolwide CAB include:

- Reimagining what community engagement can/should be;
- Planning for one-, three-, and five-year goals, objectives, strategies and metrics;
- Drafting process guidelines for making decisions and sharing power between the School of Public Health and communities; and
- Creating a relationship based on reciprocity where the school collaborates on priorities impacting community stakeholders while receiving guidance from CAB members.

The search process for CAB Planning Committee members involved outreach to employers, community partners, public health alumni, postings in the UC Berkeley School of Public Health twice-monthly newsletter, and through the personal networks of ARC4JSTC Steering Committee members who co-led this effort (e.g., Audrey Cristobal, Bo Chung, Clyde Oden, Jr., and Sarah Reynolds) in collaboration with members of the Public Health Alumni Association (PHAA). Honoraria for planning committee members were secured for initial support of the following five members:

- **Kanwarpal Dhaliwal, MPH**, associate director, RYSE
- **Nihari Patel, MPH**, operations & financial manager, UCSF Cancer Center
- **Amea Raval, MS**, research director, Asian Pacific Environmental Network
- **Angelo Sandoval, JD, MPA**, senior organizer and legal advocate, Ella Baker Center for Human Rights
- **Sabrina Saunders**, founder, One Accord Project

Meetings to date, which have been hosted virtually, have centered on relationship building efforts, developing an actionable scope of work, and identifying strategies and goals for the recruitment and creation of a CAB. The CAB Planning Committee is currently assessing ways that it can continue its work together and revisiting the project charter to determine what shifts and resources are needed.

**(3) Describe how the school engages external constituents in regular assessment of the content and currency of public health curricula and their relevance to current practice and future directions.**

Changemakers External Task Force

As described in F1(2), the charge of the Changemakers External Task Force includes development of recommendations for curricular, pedagogical, and assessment changes. Faculty and staff have taken the recommendations of the Changemakers External Task Force for changemaker vision, definition, and skills/competencies, and developed specific plans to implement them:

- Microcourses: Four one-unit micro courses that incorporate the identified competencies have been developed. These micro courses were offered to students starting in Spring 2022, and serve as a pilot to inform future changemaker courses. They include a Public Health Advocacy course taught by Harry Snyder and colleagues, a Media Advocacy and Strategic Communications for Public Health course taught by Lori Dorfman and Berkeley Media Studies Group, a Community Organizing class taught by Meredith Minkler and colleagues, and a Leading Change course taught by Dean Michael Lu.
- Enhancement of required leadership breadth course: Starting in the fall of 2021, the six-month Leadership Course offered through RISE: Berkeley Public Health Careers and Leadership Office has been enhanced to incorporate a greater focus on developing the changemaker competencies.

Alumni Survey

Starting in 2022, alumni surveys will be sent to MPH and DrPH graduates one, two, and three years after graduation. The cumulative survey results are used to inform the faculty and administrative leadership in their efforts to understand what skills are most useful and applicable in post-graduation destinations, areas in which graduates feel well prepared, and areas in which they would have benefitted from more training or preparation. Details on 2022 alumni survey findings are provided in Section B.5.1. and details on alumni survey data collection methodology are provided in Section B.5.2.

MPH Practicum Preceptor Survey

Preceptors are invited to share feedback about their recent work with a UC Berkeley School of Public Health MPH student for their practicum. Online surveys provide an opportunity for preceptors to reflect upon what the student accomplished, the quality of the work that was produced, and suggestions to further enhance the student's development as a public health professional (including what skills and training opportunities influence their preparation to practice public health in their respective work settings). For our MPH program, preceptor feedback describes the impact of the practicum to the training of public health professionals and informs ways that MPH faculty can further enhance support for students and organizations as they work together. The feedback also allows us to improve the practicum process for future host organizations and individual preceptors.

**(4) Describe how the school's external partners contribute to the ongoing operations of the school, including the development of the vision, mission, values, goals and evaluation plan and the development of the self-study document.**

Strategic Plan Development: PHAA and Dean's Advisory Board

As described in Section F.1.1, the School of Public Health consults with the PHAA Board and the Dean's Advisory Board on strategic planning. Dean Michael Lu presented proposed updates to the strategic plan at the May 2022 Dean's Advisory Board Meeting and September 2022 PHAA Board Meeting. Guiding questions posed to external partners at these meetings included: (1) What other opportunities and threats should we consider to help inform the strategic plan? (2) What other areas are critical to the future of the school over the next five years? and (3) To what extent do these goals and strategies excite you as a stakeholder? External partners shared their recommendations on actionable strategies to strengthen the school's role as a global leader in research, education, and social impact.

COVID-19 Response: Community Action Team

The Community Action Team (CAT) includes members of student, faculty, and staff groups and is an example of community-identified needs driving opportunities for action within the School of Public Health. Since March 2020, CAT has aimed to maximize the well-being of communities affected by the COVID-19 pandemic by tapping into the School of Public Health's individual and collective wellspring of activism, expertise, and commitment to collaboration. CAT activities in partnership with external partners include:

- Mobilizing action:
  - Linked 200+ volunteers to a weekly mailing list of opportunities managed by CAT.
  - Recruited over 30 students to assist the Basic Needs Center.
  - Bottled 700+ hand sanitizers for local labs and providers.
  - Connected volunteers to opportunities with the San Francisco Department of Public Health, Meals on Wheels, and SF UndocuFund.
- Changemaking through policy and advocacy: CAT responded to the calls of community organizers, activists, and local organizations to address pressing, unmet needs due to COVID-19.
  - Connected our community to advocacy-related efforts on our COVID-19 website: <https://publichealth.berkeley.edu/category/covid-19/>
  - Heightened awareness about the impact on the homeless community through publication of the report "For the Good of Us All: Addressing the Needs of Our Unhoused Neighbors During the COVID-19 Pandemic" with input from partners in city and county government, in community based organizations, and in organizations advocating for people experiencing homelessness.
- Increasing PPE and equity:
  - Involvement with the N95 Decontamination Research Group, a university and private sector collaboration that includes over 60 collaborators ([www.n95decon.org](http://www.n95decon.org)).
  - Launched Shield the Bay coalition led by Professor of Practice in Maternal, Child & Adolescent Health Jaspal Sandhu and local SF Bay Area engineers using 3D printing and human-centered design to create face shields that fit well and protect healthcare workers at FQHCs ([www.gofundme.com/f/shield-the-bay](http://www.gofundme.com/f/shield-the-bay)).
  - Delivered 60 visors for 60 healthcare workers within partnering agencies, raised over \$10,000 to help scale their effort to create 1,000-2,500 shields, and donated 1,187 masks to organizations in need.
- Hosting blood drives: In partnership with the American Red Cross, CAT collected 62 pints of blood at blood drives, which translated to 184 units of blood for patients in East Bay hospitals.

**(5) Provide documentation (eg, minutes, notes, committee reports, etc.) of external contribution in at least two of the areas noted in documentation requests 3 and 4.**

For Documentation Request 3, the following documents are included in the ERF F1.5:

1. Changemakers External Task Force
  - a. [Notes] Changemaker Task Force charge: 10/12/2020
  - b. [Presentation] Changemaker External Task Force competency recommendations: 1/28/2021
  - c. [Notes] Changemaker Program Task Force update: 5.25.21
  - d. [Presentation] Changemaker Program Task Force update: 6/2/2021

For Documentation Request 4, the following documents are included in the ERF F1.5:

1. Strategic plan development: PHAA and Dean's Advisory Board
  - a. [Agenda] Dean's Advisory Board: 5/23/2022
  - b. [Handout] Dean's Advisory Board: 5/23/2022
  - c. [Presentation] Dean's Advisory Board: 5/23/2022
  - d. [Presentation] PHAA board meeting: 9/19/2022
  - e. [Notes] PHAA board meeting: 9/19/2022
2. COVID-19 response: Community Action Team
  - a. [Report] For the Good of Us All: Addressing the Needs of Our Unhoused Neighbors During the COVID-19 Pandemic: April 2020
  - b. [Presentation] CAT overview and impact: May 2020
  - c. [Newsletter] CAT newsletter: June 2020

**(6) Summarize the findings of employers' assessments of program graduates' preparation for post-graduation destinations and explain how the information was gathered.**

In partnership with the Dean's Office, Career Services conducted an employer survey in October 2022 as part of schoolwide strategic planning. The survey was designed to assess employer perceptions of foundational competencies among BPH graduates, as well as to invite employer feedback on specific knowledge, skills, and abilities of high importance to their current work.

The survey was distributed to 2,000+ contacts in the Career Services database, including an invitation to recipients to share the survey with individuals in their organization who they believed would be best suited to complete the survey. Two hundred thirty-five (235) responses were collected, reflecting a broad range of sectors, organizations, and experience.

The largest groups of respondents came from government agencies (29%), nonprofit organizations (21%), academic institutions (20%), and healthcare organizations (18%). Approximately two-thirds (64%) of respondents work in large organizations (250+ employees), with another 15% each in organizations with 10-49 and 50-249 employees; the remaining 5% of respondents represented organizations with fewer than 10 employees. The large majority of respondents (93%) have at least five years of professional experience; approximately one-fifth (22%) have five-10 years, one-third (34%) have 10-20 years, and 37% have over 20 years. Two-fifths (42%) of respondents are BPH alumni.

The large majority of respondents (90%) indicated School of Public Health graduates had been hired by their organization in the past three years; of them, approximately one-half (49%) indicated fewer than 10 graduates had been hired, with 29% unsure and 22% indicating 10 or more graduates had been hired. All respondents (100%) indicated they would recommend hiring graduates to their colleagues.

Respondents were presented a list of competency areas to rate by importance to their current work/organization. The majority of respondents rated each competency area as "very important," with the largest number of respondents rating *Communication* as "very important" (89%), followed by 86% for *Evidence-Based Approaches to Public Health* and 83% for *Diversity & Culture*. Meanwhile, the competency areas of *Planning & Management to Promote Health* and *Policy in Public Health* received the fewest responses for "very important" (51% and 54%, respectively) and the most responses for "not important" (7% and 8%, respectively). For each competency area, nearly all respondents (92%-99.5%) indicated the competency area is at least "moderately important," validating the need for students to receive training across these foundational competency areas.

Respondents whose organizations have hired our graduates in the past three years were asked to rate the level of proficiency observed for each competency area or to indicate if they were unable to observe or assess this competency area. Among those who were able to make assessments, responses reflect the following proficiency levels by competency area (sorted by percent "highly proficient"):

**Table F1.6.1 Employer Perceptions of Graduates' Proficiency in Foundational Competencies**

Competency Area	Highly proficient	Moderately proficient	Not proficient
Evidence-Based Approaches to Public Health	67%	33%	1%
Diversity & Culture	64%	33%	3%
Communication	57%	41%	2%
Interprofessional Practice	44%	50%	6%
Public Health & Health Care Systems	40%	51%	9%
Planning & Management to Promote Health	37%	55%	8%
Systems Thinking	36%	57%	7%
Leadership	36%	58%	7%
Policy in Public Health	31%	56%	13%

Results indicate that employers perceive School of Public Health graduates to be the most well prepared in the areas of *Evidence-Based Approaches to Public Health*, *Diversity & Culture*, and *Communication*, with the majority of employers indicating graduates are "highly proficient" in these areas (67%, 64%, and 57%, respectively); these areas also received the lowest percentage of "not proficient" responses (1%, 3%, and 2%, respectively). Given that these three competency areas are also the three rated "very important" by the most employers, these responses indicate that the strengths of BPH graduates are meeting the top needs of employers.

On the other hand, the *Policy in Public Health* competency area received the lowest percentage of "highly proficient" responses (31%) and the highest percentage of "not proficient" responses (13%). Given that 54% of employers rated this competency area as "very important" to their work, these responses indicate opportunity to better prepare students in policy. Among those who responded "not proficient" in this area, qualitative feedback speaks to the value of understanding U.S. healthcare policy and history, including the federal government role, to their current work/organization.

Additional qualitative feedback reflects strengths and areas for future growth. For example, one respondent who rated our graduates as "highly proficient" in *Evidence-Based Approaches to Public Health* shared, "I am extremely happy that graduates are now trained in R and it would be great if they were trained in data visualization platforms (Tableau, Power BI)." Similarly, while 98% of respondents rated School of Public Health graduates as at least "moderately proficient" in *Communication*, one "moderately proficient" respondent highlighted the ongoing need to prioritize training in this area: "Communication! I truly think the ability to communicate your work and general public health messaging clearly to lay people is a critical skill heavily valued in public health education (including at UC Berkeley School of Public Health)."

These employer assessments of graduate preparedness for post-graduation destinations are highly valuable to informing curriculum and training opportunities for our students. Combined with additional external assessments of students while enrolled (e.g., preceptor surveys), these assessments help to ensure graduates are well prepared for the current public health workforce.

**(7) Provide documentation of the method by which the school gathered employer feedback.**

Documentation is available in ERF F1.7.

**(8) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: UC Berkeley School of Public Health regularly and genuinely engages with external stakeholders, including alumni and public health leaders, for input on strategic planning, programs, content and currency of public health curricula, and alignment of curricula with public health practice and research needs.

Plans for Improvement: *Strengthen Community Engagement and Build an Ecosystem for Social Impact* are strategies to achieve the School of Public Health's goal of bending the arc of the moral universe toward health equity and social justice. Input from community stakeholders and partners will be essential as the School of Public Health seeks to expand opportunities for students and faculty to collaborate with community groups, and launch programs to help community changemakers accelerate change. The senior executive dean for practice & chief social impact officer is a new role for the school and will provide leadership and coordination in these areas. We will continue the annual alumni survey, which will serve as additional tools to inform curricular and program planning.

---

## **F2. Student Involvement in Community and Professional Service**

---

**Community and professional service opportunities, in addition to those used to satisfy Criterion D4, are available to all students. Experiences should help students to gain an understanding of the contexts in which public health work is performed outside of an academic setting and the importance of learning and contributing to professional advancement in the field.**

**(1) Describe how students are introduced to service, community engagement and professional development activities and how they are encouraged to participate.**

### Activities During New Student Orientation (NSO)

NSO is an opportunity for students to meet our community members, learn about resources available to students, sign up for student organizations, and network with their cohort.

### **Anti-Racism Workshop**

The UC Berkeley School of Public Health is committed to becoming an anti-racist institution. In order to ensure that all of our incoming students understand the basic concepts and have a shared language to understand anti-racism, we host a three-hour virtual anti-racism workshop during NSO. The workshop is facilitated by two alumni, Dr. Zea Malawa and Jenna Gaarde, MPH. This interactive workshop provides an overview of anti-racism and students will be introduced to key concepts and principles in anti-racist practice. Students gain an understanding of their roles in advancing anti-racism through public health and some new skills to help them in the work. We have been offering this workshop each fall since 2020.

### Communications with Our Student Community

COVID-19 and the move to remote learning and community building during 2020-22 made finding ways to provide regular communication to our school community critical. There are a number of regular communications that are shared with our school community, including regular communications from our dean and official communication from the chancellor and other campus officials. In addition to these forms of communication we also have developed a series of regular communications that are directed specifically to our student community, including:

### **Summer communications to students in advance of starting the program**

All of the communications from our central Student Services office begin when the student is offered admission to the school and throughout the matriculation process. The goal of these communications is to make sure students have the information they need to arrive and enroll and ultimately thrive during their time here at UC Berkeley School of Public Health. The spring and summer communications happen about every two to three weeks with different milestones and deadlines shared to help the students prepare to attend and answer questions or address concerns that may arise.



### Friday Note to students

Part of building community and maintaining consistency with students is through regular communications. Assistant Dean for Students Quin Hussey sends out a weekly communication to students each Friday during the school year. Entitled the “Friday Note” Quin uses the communication to share a curated list of important upcoming events, share mental health and wellness resources, and provide a touchpoint for students. At the end of each note Quin includes a final word which is a more authentic and personal note to students. Sometimes it is a reflection on a world event or simply a reflection that they have heard throughout the week that they think is important to share. Asst. Dean Hussey always closes the message with a poem, quote, song, or some form of creative expression. This note, while seemingly mundane, has become a beloved part of our students’ week. Many students message Hussey to share gratitude for the message. As exemplified below.

“Hello Dean Hussey,

You may never meet me since I'm an Online MPH student, but I want you to know that your words of encouragement have made a difference this semester. Returning to grad school after several years away has been challenging, along with being a healthcare provider during a pandemic and the typical challenges of being human in this strange era. Thank you for your succinct messaging mixed with kindness. It has helped me feel like there are real people on the other side of the internet!”

“Hi Quin,

I hope this email finds you well! I just wanted to say, this email was **so beautiful to read and was so moving**. Your emails are always so appreciated and, as an undergraduate student graduating in a couple of weeks, I will truly miss them. Thank you so much for taking the time to write these messages to us every week. I promise you that these emails are read and you've touched each and every one of the students. Despite not having met you in person, I do feel connected and supported by your messages.

Thank you so much.”

Attached [here](#) is an example of the Friday Note. These personal touches help students feel more connected to the school and one another.

In addition to the Friday Note the Hussey also sends out a weekly student digest. This digest contains job postings, events happening on campus, and reminders about important deadlines or events. The digest is typically sent out each Wednesday afternoon during the school year and is another tool used to provide students with timely opportunities and information.

### Monthly statements from our Chief of DEIB

Chief of Diversity, Equity, Inclusion, and Belonging Ché Abram writes statements for a myriad of identities to increase the voice and visibility of our community members. These statements also include responses to social injustices such as natural disasters, war, police violence, school shootings, federal changes in the law, and more. Each statement includes opportunities to engage in community actions or events and provides a small set of resources to universitywide, local, and online resources, including training opportunities and mental health resources.

### RISE: Berkeley Public Health Careers and Leadership Office

At UC Berkeley School of Public Health, a cornerstone of our mission is to develop diverse leaders for professional and research careers. We accomplish this not only through our undergraduate, master’s, and doctoral programs, but also by providing students with opportunities for additional leadership training and experience through the RISE office, including:



- **Leadership Day:** To kick off the school year, RISE invites newly admitted public health students to attend the annual Leadership Day each August. This is one of the first opportunities for students to interact with current and former students, professors, and community leaders before classes begin. Students also learn about the many opportunities for practicing leadership in the diverse field of public health and how they can take advantage of their time at the School of Public Health to develop their leadership skills.
- **Leadership Boot Camps:** In consideration of the requisite skills needed for successful careers as leaders in the field of public health, RISE offers Leadership Boot Camps, half-day trainings that are held at the start of every semester. All the School of Public Health students are invited to take part in these Bootcamps, which are designed to train students with fundamental leadership skills that will help them find the internships and jobs they desire. Boot Camp trainings reflect the challenges involved working in our field of public health (e.g., bridging different academic disciplines and problem-solving approaches) and include topics such as public health leadership, teamwork, organizational awareness, and personal branding.
- **Public Health 291 Course:** In Spring 2020, RISE launched a Public Health Leadership course, PH 291, to prepare MPH students to lead and influence the field both during school and after graduation. Our vision is to foster an environment of open dialogue and to encourage each student to think critically about how to define and apply models of leadership, communicate and negotiate in organizational environments, empower others, guide decision-making, and collaborate effectively in teams, all within the context of diverse public health practice. Much like our leadership boot camps and other offerings, this course will foster an active learning environment through a combination of lecture, discussion, role-play exercises, and real-world application of learning around public health leadership.
- **PHLEX: Public Health Leadership and Experience Exchange:** Starting in 2020, RISE began using an online platform/database to make job opportunities available to our students and graduates. The platform is called PHLEX (Public Health Leadership and Experience Exchange) and hosts hundreds of postings each year, including internships and fellowships, in the public health field. The platform also facilitates registration for career services workshops and appointments. These resources are invaluable to our students and are available to our alumni for life. This lifetime support helps to ensure that our graduates are able to find gainful employment opportunities throughout their careers. This sort of support helps students to be able to graduate from the school with confidence that they will be able to find employment opportunities that will allow them to make an impact, sustain themselves, and manage their student loan debt.
- **Career champions:** Alumni volunteers assist students by sharing knowledge and offering networking opportunities, providing ways for students to explore work in various public health fields, and inspiring new professionals to discover public health careers with meaning and purpose. This includes informational interviews and talks with students, participation as a class speaker or panelist, hosting student(s) for a site visit or job shadow day, providing “real world” projects for classes, presenting professional development workshops, or holding an employer information session.

### DREAM Office

The mission of the DREAM (Diversity, Respect, Equity, Action, Multiculturalism) Office is to prioritize diversity, equity, inclusion, and belonging in creating a public health workforce that mirrors the demographics of our communities.

We advocate to reduce barriers to entry into graduate school at the UC Berkeley School of Public Health and we hold the school accountable to any institutional barrier that may exist. We are actively engaged with the students from the time they are “prospective,” all the way through the day they walk across the stage at UC Berkeley’s Greek Theatre and graduate. Our goal is to support students to achieve success while at UC Berkeley School of Public Health and then to be well equipped to enter the workforce to make changes for a better world.

DREAM services and programs for current students include:

- **Advising and mentoring:** The DREAM office provides a variety of support for current students who have faced historical, economic, and educational barriers. We currently have two professional staff who are available for advising appointments.
- **Preparatory seminars:** DREAM seminars are two separate programs intended to prepare incoming MPH students for the transition to graduate-level studies and life at UC Berkeley. The seminars focus on academic preparation, introduction to key campus resources; and development of important skills such as building community, developing leadership, time management, self-reflection, and managing stress.

DREAM services and programs for prospective students include:

- **Admissions workshops and outreach:** You can find our team tabling at conferences, such as the California Forum for Diversity in Graduate Education and our own Fall Prospective Student Conference in October. We also host workshops at various schools and partner organizations nationwide about public health, graduate school, admissions information, application advising, and career opportunities.
- **DREAM office monthly newsletter** is laden with examples of public health, spotlights of current students and alumni, and many volunteer, job, and internship opportunities.

### Student Government/Committee Service

The School of Public Health Student Government is a group of public health students that acts as a liaison between the students and the administration and faculty. It functions as a communication vehicle between these entities to involve and inform students of ongoing activities and decision-making at the school.

Student Government officers elected for 2022-2023 are:

- Student Government co-lead: Natalia Smith Garcia de Leon
- Student Government co-lead: Pamela Torresdey
- Communications co-lead: Shelby Rorabaugh
- Communications co-lead: Cheyenne Pritchard
- Communications co-lead: Jarett Maycott
- Budget and Finance: co-lead Philip Shih
- Budget and Finance: co-lead Alondra Ruiz
- Events co-lead: Laura Sanavio
- Events co-lead: Sabrina Adams
- Events co-lead: Jisoo Yu
- Steering committee student representative: Karla Vargas
- Steering committee student representative: Monica Hu
- Diversity equity and inclusion (DEI) co-lead: Kevin Ru

- Diversity equity and inclusion (DEI) co-lead: Lavanya Sankaran
- Environment and sustainability leader: Jyotsna Maddukuri
- Faculty Advisory Committee (FAC) student representative: Alana Acuna
- Faculty Advisory Committee (FAC) student representative: Sena Karavas
- Educational Policy and Curriculum Committee (EPCC) representative: Ariel Siegel
- Educational Policy and Curriculum Committee (EPCC) representative: Kelsey Oliver
- Undergraduate representative: Andrew Perera
- Undergraduate representative: Serenai Dinçer
- PhD/DrPH representative: Marlena Robbins

UC Berkeley also has opportunities for students to participate on committees. Campus committees are tasked with shaping policy in a wide variety of important areas including environmental initiatives, cyber and information security, parking, and housing. Student representatives ensure that the unique needs of the student population are taken into consideration when new policies are created and old ones are revised. At the University of California system-level students have opportunities to participate on committees that set systemwide policy.

### Student Groups

Our student groups—engaged in interests as diverse as health policy and intramural sports—offer public health students the opportunity to attend events, build relationships with fellow students and faculty members, and gain hands-on public health experience within the community. Groups open to School of Public Health students include:

- Alianza Latinx for Public Health Action (ALPHA)
- Asian & Pacific Islander (API) Women's Circle
- Association of Public Health Infectious Diseases Students (APHIDS)
- Black Advocates for Equity in Health (BAEH)
- Cal Student Assistance for Public Health (Cal STAPH)
- Cal Undergraduate Public Health Coalition
- Haas Healthcare Association (HHA)
- Student Collaborative for Impact Leadership (SCIL)
- *The Public Health Advocate* (journal)
- Queering Public Health

### **Joint Medical Program/Berkeley Public Health Student Groups**

- Freedom School for Intersectional Medicine & Health Justice
- Health Students for Climate Action (HEALS-CA)
- The Institute for Healing and Justice
- Medical Division at the Suitcase Clinic
- Students for a National Health Program (SNaHP)
- White Coats for Black Lives at Berkeley BPH

Refer to our website <https://publichealth.berkeley.edu/student-life/groups/> for more information.

### Coursework

Anti-Racist and Racial Justice Praxis Graduate Student Elective PH 215 taught by JMP alumni Dr. Zea Malawa and Dr. Jenna Gaarde. Course first offered in Spring 2021 and repeated in Spring 2022. The Anti-Racist and Racial Justice Praxis Spring Student Elective is a semester-long student elective course for continuing MPH and DrPH students. This class has cultivated more than 80 student champions to develop an anti-racist analysis of public health, present a set of anti-racist public health tools, and build skills necessary for advancing an anti-racist agenda within the field.

Graduate Student Instructor (GSI) Anti-Racism Pedagogy training is a series of one-hour workshops for GSIs to deepen their anti-racist praxis and build trust as a learning community. In this space, there is utilization of case studies based on real-life experiences to reflect, analyze, and workshop potential responses to challenges we encounter as GSIs.

## **Fellowships and Other Opportunities**

### **Global Health Fellows, funded by Gilead, Chevron**

The Global Health Fellowship, sponsored by Chevron, Gilead Sciences, and the Morris Family Fund recruits and supports future public health leaders from low and middle income countries (LMICs) who are dedicated to improving health equity and global health issues. UC Berkeley School of Public Health faculty and trained staff will aid Global Health Fellows with:

1. Mentorship
2. Research projects
3. Global health training fellowships
4. Robust cohort experiences
5. Field placements
6. Post-training support

Global Health Fellows are matched with a faculty mentor based on their research and career interests. Global health faculty advise fellows on actionable and fundable protocols throughout their studies using current analytic methods and tools. The school facilitates field trips to pharmaceutical companies, healthcare providers, and county health departments and offers global health workshops and conferences to build students' knowledge and increase their professional network. School of Public Health curriculum also incorporates activities that are designed for fellows to engage in thoughtful discussions and create impactful connections. To ensure fellows are appropriately applying their knowledge and skills, they are placed in summer internships, which include sites at nonprofit organizations, private companies, and government agencies. The school also provides support for seeking funding for continued research and formal mentoring to ensure fellows are equipped with proper training and knowledge to perform successfully in their home country and in the field of public health.

### **Health Policy Advocacy Initiative**

The overarching goal of the Health Policy Advocacy Initiative, with support from the Louis and Anne Abrons Foundation, is to support the development of a cadre of health professionals who have the knowledge, experience, and relationships to serve as effective agents of change in improving health policy regionally, nationally, and globally. The primary activities supported through this initiative include:

- **Health Policy Advocacy courses:** PH 220D (Health Policy Advocacy) focuses on data-based strategies using persuasive written and oral communication skills necessary to preserve and/or improve the health status of populations.
- **Health Policy Advocacy fellowships:** Fellowships are awarded to graduate students from underrepresented minority (URM) backgrounds who are committed to systemic improvements in public health outcomes for society's most vulnerable populations. Awards are applied to fall and spring semesters fees and include a practicum stipend. Skill-building opportunities are extended through enrollment in PH 220D and participation in an advocacy-focused practicum (e.g., with health justice/community-based organizations pursuing active policy/strategic campaigns, participating in policy hearings, building coalitions, organizing diverse stakeholders/constituents to build support for health equity). The advocacy-focused practicum provides enrichment in how advocacy skills address public health priorities and expands fellows' network of professionals engaged in advocacy efforts.

Connections to advocacy opportunities are made through the RISE office's partnerships with public health advocates/organizations and alumni engaged in advocacy efforts.

- **Boots on the ground symposia:** The school organizes presentations from local and state leaders who are actively engaged in health policy campaigns to describe their current work and engage students, faculty, and the UC Berkeley community in their campaigns for change. Past events have included a symposium on the California ballot initiatives and the state of politics and procedures of the initiative process, childhood vaccinations, gun control, and others. Future topics may include efforts to address immigration reform, universal health coverage, and police violence.

### **Kaiser Permanente Scholars**

In collaboration with Kaiser Permanente and the East Bay Community Foundation, the Kaiser Permanente Health Scholars Program (KP Scholars) looks to increase the number of public health professionals who will work to improve the health of people living in underserved and vulnerable communities. With support from the DREAM and RISE offices, students are supported in developing their career plans and invited to participate in events such as employer info sessions, LinkedIn and resume review workshops, and mock interviews to prepare them to secure internships and jobs. Furthermore, virtual field trips with Bay Area public health leaders are organized to expose students to leaders' work, leadership journeys, and advice on lessons learned. In addition to professional and personal development, many scholars contribute to widening the health pipeline through mentorship in programs like GRADS Ambassadors, through which they are paired with undergraduate URM students. As part of these programs scholars provide advising, meet with students, and participate in a number of workshops. The success of the KP Scholars program is reflected in the successes of our alumni. Many have gone on to serve in state and local health agencies, have become leaders in health care systems, and serve in nonprofits that target underserved communities.

### **BSC Fellows**

In partnership with the Blue Shield of California, UC Berkeley School of Public Health is looking to increase the number of underrepresented minorities (URM) in public health leadership. In its inaugural year, the Blue Shield of California Fellowship program is creating expanded opportunities for education and professional training for URM students through four main focus areas: pipeline development, academic & personal development, talent development, and executive education. We are expanding on the pipeline of URM leaders in public health through early outreach to community colleges, HBCUs, diverse high schools, diverse undergraduates, and targeted outreach to students of URM backgrounds. Moreover, through leadership training, identity formation, and professional development workshops we are enhancing cohort experience, ensuring student success, and developing self-assured public health leaders. Additionally this program ensures fellows gain real-world work experience that aligns with their interests through experiential learning, collaborative research projects, paid internships, and fellowships.

### **RRR Week Programming**

The week between the end of the semester and finals is called Reading, Review, and Recitation week (RRR week). During this time, no new content is covered in class. This week is intended as a review week for students. In an effort to deepen the community and provide extra support for students during RRR week Assistant Dean for Students Quin Hussey and Chief of Diversity, Equity, Inclusion, and Belonging Ché Abrams host a series of activities designed to help students prepare for finals. Some of the activities included

- Study Hall: Keeping our student space open until 9 p.m. Monday through Thursday to provide students with a quiet safe space to study,
- Providing meals for students, including two-home cooked full meals along with a full array of snacks, coffee, and small meals,
- Providing a drop-in support circle for students needing extra emotional support,
- Providing mindfulness and stretching activities for students, and

- One of our student groups provides Friday afternoon rest activities including yoga, stretching, and a meal for students.
- 

These activities happened during the Fall 2021 semester. We offered a smaller selection of activities during the Spring 2022 semester due to staff capacity.

#### Public Health Alumni Association (PHAA)

- The professional development committee hosts webinars on public health topics to provide professional development opportunities for alumni and students.
- The events and networking committee organizes social events such as outdoor hikes, happy hours, volunteer days of service, student-alumni dinners, and game nights, all with the goal to increase student-alumni interaction.
- The scholarship and diversity committee raises funds annually to provide fellowships to both incoming and continuing students with the goal of increasing student diversity at the school.
- The PHAA board recruits four student representatives (undergrad, first year MPH, second-year MPH, and doctoral) annually to serve on the board to ensure the student perspective is included in the board's decision making process.
- The PHAA board co-sponsors and participates in many schoolwide activities such as career/networking events (Career Cafe, Career Champions, and job shadowing, career panel discussions, etc.) and donor stewardship events (annual fellowship reception) which aim to connect donors and fellowship recipients to increase students' awareness about how philanthropy impacts their educational experience.

#### American Public Health Association (APHA) Hosting and Tabling

Each year during the APHA Annual Meeting, the school brings students and staff to the meeting to staff the booth at the event and also to provide opportunities for students to attend the conference and meet fellow colleagues and alumni who often attend APHA. Each year we also host a reception for our alumni, students, faculty, and staff who are at APHA. This is a wonderful way for the community to come together and build new connections, strengthen existing relationships, or rekindle old connections.

### **(2) Provide examples of professional and community service opportunities in which public health students have participated in the last three years.**

In the 2022 alumni survey, recent graduates shared their most meaningful professional development experiences during their time as students. Some responses are provided below, noting internships/practicums and particular courses as valuable professional development experiences:

- "My practicum, which was focused on Global One Health. I evaluated the role of industrial food animal production in context of accelerated anthropogenic climate change. The practicum was mentored by the late Prof. Kirk R. Smith, and I feel extremely fortunate having had this educational opportunity. It was meaningful because it allowed me to draw on the new knowledge gained through the program; I am pleased with the outcome, which I aim to publish."
- "My internship at a labor union was challenging and pushed my belief system around public health organization relationships with the private sector and political system. It helped me think more critically about policy and funding structures and helped me feel empowered to consider career paths that I hadn't thought about or known about prior (advocacy/nonprofit sector, occupational safety)."
- "My internship. I interned at Mujeres Unidas y Activas as a qualitative data analyst. This opportunity allowed me to strengthen my research skills: conducting interviews, data analysis,

using data for policy development and advocacy, and applying for grants. It was a great experience.”

- “Debating the propositions in Public Health Advocacy class. I had never bothered to look into what we were voting for to that extent and I never really forced myself to debate a side I had never chosen. It taught me that I could come up with solid arguments and counter arguments if I just tried.”
- “Negotiations [course]. Very vital info that I have shared with young professionals.”

Recent graduates also shared their most meaningful community service experiences:

- “Participating in student leadership opportunities—developed professional skills, advocated for student community, met great people that I would not otherwise have met during my program.”
- “I volunteered at a COVID testing site in the summer of 2020. Two undergrad students came up to me and said I was their GSI for the global health course that summer. In probably one of the weirdest years of my education, it felt good to still connect with students and feel like I was doing my part to model good community outreach (and not just talk about it.)”
- “I found community with the Asian and Pacific Islander Women's group.”
- “We did a group project for the program evaluation course in collaboration with the St. Louis Zoo on Box Turtle conservation (education and outreach). The project was meaningful because it was completed in a One Health/One Medicine context.”

**(3) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: Berkeley Public Health provides community building and professional service opportunities to students through student groups, coursework, and fellowships. Students receive information about opportunities through multiple communication channels on a regular basis. The RISE: Berkeley Public Health Careers and Leadership Office, DREAM (Diversity, Respect, Equity, Action, Multiculturalism) Office, and Public Health Alumni Association (PHAA) are resources that provide trainings, workshops, and other activities to prepare students for service opportunities and roles in public health leadership.

Plans for Improvement: Centralization of information about courses that include community-based service projects will better promote these opportunities. Evaluation of student participation in trainings, workshops, and other activities will help identify student populations for further engagement to increase participation.

### F3. Delivery of Professional Development Opportunities for the Workforce

The school or program advances public health by addressing the professional development needs of the current public health workforce, broadly defined. Professional development offerings can be for-credit or not-for-credit and can be one-time or sustained offerings.

- (1) Provide examples of education/training activities offered by the school or program in the last three years in response to community-identified needs in the format of Template F3-1. For each activity, include the number of external participants served (i.e., individuals who are not faculty or students at the institution that houses the school or program) and an indication of how the unit identified the educational need.

**Table F3.1.1 Education/Training Activities Offered in Response to Community Identified Needs**

	Education/training activity offered	How did the unit identify this educational need?	External participants served*
<b>Example 1</b>	<p><i>COVID-19: Disparities, Dialogue &amp; Dissemination (A Communication Training Series)</i></p> <p>In an effort to train more public health professionals with the requisite scientific communication skills, this six-part communication training series was developed. Together with three registered student organizations, the RISE: Berkeley Public Health Career &amp; Leadership Office hosted this training series from January through March 2021 that examined COVID-19 health disparities and how to translate COVID-19 research and information to the general public. The training series addressed Communication Fundamentals in Public Health, Vaccine History, Misinformation &amp; Communication, How to Write a Public Health Op-Ed, and How to Convey COVID-19 Info via Social Media. Featured speakers from Berkeley Public Health included Dr. Linda Neuhauser, Dr. John Swartzberg, and Dr. David Tuller.</p>	<p>In the first year of the COVID-19 global pandemic, it became evident that there were gaps in public health messaging to communities about the requisite public health mitigation strategies to curb the spread of COVID-19 and save lives. While new data was emerging daily with the novel virus, there was a disconnect between the important findings researchers had access to and what the general public understood about the virus. Mis/disinformation abounded and yet, at the same time, we began to see the emergence of public health/health leaders with very strong communication skills using social media, interviews, and op-eds to get important information out to the public.</p>	94



	Education/training activity offered	How did the unit identify this educational need?	External participants served*
<b>Example 2</b>	<p><i>Young Worker Leadership Academy</i></p> <p>The three-day academy brings high school students together in teams from around the state to learn about their rights on the job and strategies for making change in the community. After completing the academy, each team leads their own community activity to promote safe jobs for youth—educating their peers, presenting to school boards for policy change, getting the word out to families and parents. Since 2005, we have led 23 Academies, including our Zoom and hybrid versions over the past two years, reaching over 500 youth—who in turn have reached thousands of people in their own communities and become leaders in their own right.</p>	<p>The Labor Occupational Health Program (LOHP) created an annual Young Worker Leadership Academy program in response to the recommendations of the California Partnership for Young Worker Health and Safety, a statewide working group representing teachers, parents, job trainers, enforcement and education agencies, employers, and others. Youth were absent from this partnership, so in 2005, LOHP partnered with our sister program, UCLA's Labor Occupational Safety and Health Program (LOSH), to develop and launch this annual academy (initially two each year), in consultation with partnership members and now with returning youth peer educators.</p>	500+

	Education/training activity offered	How did the unit identify this educational need?	External participants served*
<b>Example 3</b>	<p><i>Berkeley Conversations: COVID-19 Series</i></p> <p>As a public service effort, the UC Berkeley School of Public Health offered four panels between 2020 and 2021 as part of the Berkeley Conversations series, featuring experts in epidemiology, infectious diseases, vaccinology, biostatistics, and genome research talking about COVID-19 and its variants, future pandemics, and how structural racism led to disparities in COVID-19 infection, illness, and death rates.</p> <p>These panels included Reopening and Reimagining after COVID-19, The Changing COVID Landscape, COVID Vaccines, and Structural Racism and COVID-19. They can be viewed on <a href="#">YouTube</a>.</p> <p>Faculty panelists from the School of Public Health included Dr. Ziad Obermeyer (Health Policy and Management), Dr. Arthur Reingold (Epidemiology), Dr. John Swartzberg (Infectious Diseases and Vaccinology), Dr. Eva Harris (Infectious Diseases and Vaccinology), and Dr. Mahasin Mujahid (Epidemiology). Dean Michael Lu moderated the Reopening and Reimagining after COVID-19 panel.</p>	<p>In 2020, as the COVID-19 pandemic began, the public was desperate for informed, science-based information on the virus, how it was transmitted, and how to avoid transmission.</p> <p>These public webcasts served to expand our social impact, differentiating facts from rumor for an anxious public and furthered our principle of putting prevention first.</p>	<p>The four panels have attracted a combined audience of 13,800 as of January 2023.</p>

	Education/training activity offered	How did the unit identify this educational need?	External participants served*
<b>Example 4</b>	<p><i>Statewide Education of Dental Professionals in California: Patient Communications</i></p> <p>Researchers, clinicians and communication experts from Health Research for Action (HRA) worked with dental professionals to design and test an educational toolkit and trainings. HRA staff partnered with dental professionals to jointly conduct trainings that have reached dental professionals statewide and those in other states.</p>	<p>HRA principal investigators and other staff routinely use participatory design to co-create and co-conduct education and training activities for community participants. In a one-year research project, dental professionals identified their needs for training and resources to improve their communication with patients. HRA researchers continuously engage with dental professionals to evaluate and refine this intervention. The intervention has reached thousands of dental professionals with the expectation of reaching 30,000 dental professionals over time. The American Dental Association is interested in rolling out this intervention nationwide.</p>	2,000+

\* External participants are individuals who are not faculty or students at the institution that houses the school or program

**(2) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: UC Berkeley School of Public Health faculty, researchers, and staff build strong relationships with local, regional, national, and international community partners and provide technical expertise and coordinated leadership to identify and address professional development needs of the current public health workforce.

Weaknesses: None identified, except that we can always do more.

---

## G1. Diversity & Cultural Competence

---

**The school or program defines systematic, coherent, and long-term efforts to incorporate elements of diversity. Diversity considerations relate to faculty, staff, students, curriculum, scholarship, and community engagement efforts.**

**The school or program also provides a learning environment that prepares students with broad competencies regarding diversity and cultural competence, recognizing that graduates may be employed anywhere in the world and will work with diverse populations.**

**Schools and programs advance diversity and cultural competency through a variety of practices, which may include the following:**

- **incorporation of diversity and cultural competency considerations in the curriculum**
- **recruitment and retention of diverse faculty, staff, and students**
- **development and/or implementation of policies that support a climate of equity and inclusion, free of harassment and discrimination**
- **reflection of diversity and cultural competence in the types of scholarship and/or community engagement conducted**

- (1) List the school or program's self-defined, priority underrepresented populations; explain why these groups are of particular interest and importance to the school or program; and describe the process used to define the priority population(s). These populations must include both faculty and students and may include staff, if appropriate. Populations may differ among these groups.**

Our school defines underrepresented minority (URM) applicants and students as individuals self-reporting their race/ethnicity as American Indian/Alaska Native, Black/African American, Native Hawaiian/Pacific Islander, or Chicano/Latino. Whenever possible, underrepresented minority counts also include those self-reporting two or more races, if one of those races is American Indian/Alaska Native, Black African American, Native Hawaiian/Pacific Islander, or Chicano/Latino. Underrepresented minority counts include only United States citizens and permanent residents. Individuals classified as temporary aliens are considered international. The school is aligned with the UC Berkeley Graduate Division's definition of URM based on what the campus is required to report to the Integrated Postsecondary Education Data System (IPEDS), the statistics, research, and evaluation arm of the U.S. Department of Education.

In addition to the above categories, the School of Public Health is also committed to defining underrepresented applicants as:

- First-generation college student
- Low-income
- Disabled
- Neurodiverse
- LGBTQI+
- Undocumented
- Formerly incarcerated
- Formerly in foster system

- Student parents
- Immigrants
- Veterans

According to the University of California Diversity statement,

“Diversity—a defining feature of California’s past, present and future—refers to the variety of personal experiences, values, and worldviews that arise from differences of culture and circumstance. Such differences include race, ethnicity, gender, age, religion, language, abilities/disabilities, sexual orientation, socioeconomic status, geographic region, and more.”

“The university particularly acknowledges the acute need to remove barriers to the recruitment, retention, and advancement of talented students, faculty, and staff from *historically excluded populations who are currently underrepresented.*”

A California Future Workforce Commission report from 2019 broadly discusses the need for health leaders from underrepresented and low-income communities to be trained and serve these communities. As such, our school strives for its student community to reflect the population of California, hence the focus on the populations defined above.

**(2) List the school or program’s specific goals for increasing the representation and supporting the persistence (if applicable) and ongoing success of the specific populations defined in documentation request 1.**

The school has a strong values commitment that states “we believe in social justice and the basic human right to a healthy life. We strive to reduce or eliminate inequity and injustice that affects the health and dignity of all people, especially those who are most vulnerable. We live a shared commitment to equity among our faculty, students, and staff.” Holding these values in alignment with our mission, we established an anti-racism, diversity, equity, inclusion, belonging, and justice strategic framework that guides the school in support of underrepresented populations. The strategic framework is presented below.

Anti-racism, Diversity, Equity, Inclusion, Belonging, and Justice (ADEIBJ) Strategic Framework 2022

**1. Teaching and Learning**

- 1.1 Advance effectual anti-racist and racial justice pedagogy and praxis in school curriculum.
- 1.2 Foster learning opportunities within the school that address intersectionality.
- 1.3 Create ADEIBJ educational opportunities that interconnect all members of the school.

**2. Social Impact**

- 2.1 Ensure the school’s ADEIBJ impact through multifaceted and collaborative community engagement.
- 2.2 Create and grow an ADEIBJ open source library of resources.

2.3 Advance the school's local, regional, national, and global ADEIBJ voice and visibility.

### **3. Belonging**

3.1 Recruit, admit, and matriculate diverse cohorts of student changemakers in public health and social justice.

3.2 Attract, hire, and retain invisibilized and absent faculty, other academics, and staff by strengthening ADEIBJ processes and practices.

3.3 Provide resources and approaches that recognize members of the school for their commitment to ADEIBJ.

### **4. Infrastructure**

4.1 Ensure ADEIBJ financial growth, stability, and sustainability.

4.1.A. Anti-racism strategic planning that centers anti-racism and racial equity praxis in the overall mission of the school by developing one-, three-, and five-year goals, objectives, strategies, metrics, and evaluation plans for anti-racist pedagogy, practice, and administration.

4.1.B Anti-racism implementation through the lens of change management (i.e., leading change): Implementation of core (cross-cutting) and program-specific elements (e.g., student experience, community engagement) with a focus on fundamental institutional change.

4.1.C. Anti-racism collaboration and alignment of efforts: Ensure alignment of the Anti-Racist Community for Justice and Social Transformative Change Program (ARC4JSTC) with campus-level anti-racism initiatives to determine/identify/create opportunities to partner with other units to elevate other anti-racist activities and initiatives and become a catalyst of anti-racism praxis on the UC Berkeley campus. We also aim to align our efforts with other efforts in public health including the ASPPH (Association for Schools and Programs of Public Health) initiative to dismantle structural racism in academic public health.

4.2 Increase financial opportunities unique to supporting intersectional identities.

4.3 Adopt healing-centered and wellness approaches schoolwide using evidence-based practices.

4.4 Ensure schoolwide ADEIBJ policies, processes, and practices are accessible, community-driven, equitable, and transparent.

- (3) List the actions and strategies identified to advance the goals defined in documentation request 2, and describe the process used to define the actions and strategies. The process may include collection and/or analysis of school- or program-specific data; convening stakeholder discussions and documenting their results; and other appropriate tools and strategies.**

#### Recruitment & Admissions Strategic Planning Processes

The recruitment and admissions team identified goals, actions, and strategies by collecting input from key recruiting and admissions staff and other stakeholders that are knowledgeable about our mission and processes. Their input was based on personal experiences of working in the field and with students. Input was collected via an activity called the “Goals Grid” during the admissions team’s most recent strategic planning process, facilitated by the Berkeley People & Organization Development Office between January and April 2022. The admissions team also sends out an annual survey to admitted students, to better understand the applicant experience. Some of the feedback provided by applicants through this survey helped to inform the actions identified below. Finally, the admissions team participated in a Graduate Admissions Institute and a Diversity Leadership Academy, hosted by UC Berkeley’s Office for Graduate Diversity during the 2021-2022 academic year. Both the institute and academy were year-long series that included monthly workshops focused on teaching research-based methods for equity based holistic recruitment, admissions, and retention. Some of the strategies taught in those sessions have been incorporated in the strategic plan and are described below.

#### ADEIBJ Strategic Framework 2022 Processes

The ADEIBJ strategic framework process happened in a two-stage process: 1) anti-racism community needs assessment and 2) diversity, equity, inclusion, belonging, and justice data review and inventory collection.

The anti-racism community needs assessment began with a call to action in the dean’s summer 2020 statement regarding the murder of George Floyd. Upon release of that statement, the executive associate dean called together a community of 30 school and external community members who devised an anti-racism baseline survey for faculty, staff, academics, and students. The survey provided data that was used to inform planning efforts over the past two years, including creation and implementation of three anti-racism goals and four workgroups.

Simultaneously, the process for the diversity, equity, inclusion, belonging, and justice (DEIBJ) data review and inventory collection happened in an alternate manner. Rather than collecting new survey data, a model was adopted from the school’s Environmental Health Sciences division that uses previous data collected from 2015-2022 alongside collecting an inventory of the DEIBJ work happening schoolwide. The data sources used were annual climate surveys, pulse surveys, and a google form to collect the inventory of activities. The culmination of that information was presented to three focus groups of faculty, staff, and students for additional feedback in May 2022. The actions and strategies were updated related to the feedback received and are reflected within this document as the Anti-racism, Diversity Equity, Inclusion, Belonging, and Justice Strategic Framework 2022.

#### Actions/Strategies for increasing representation and supporting ongoing success of underrepresented populations

### Undergraduate Public Health BA Program

Public Health offers satellite advising hours with the Educational Opportunity Program (EOP) office to host biweekly advising sessions for EOP students. EOP has provided first generation, low-income, and underrepresented college students with the guidance and resources necessary to succeed at the university. Academic advisors/co-managers and/or public health peer advisors will also host informational sessions or pre-application workshops provided to students who are a part of the EOP STEM program.

Additionally, pre-application workshops are provided to other on-campus partners that work with underrepresented populations. The public health academic advisors/co-managers and public health peer advisors (declared public health majors in their junior or senior year) have hosted these workshops for the following groups:

- **Biology Scholars Program (BSP):** BSP at UC Berkeley is a program that challenges the "by the numbers" popular view (e.g., SATs and high school GPAs as good predictors of success) about who can and should do science. Over the past 20 years, of the 2,080 BSP graduates, 60% have been underrepresented minorities (African American, Chicano/Latino, and American Indian), 70% women, and 80% from low-income backgrounds and/or the first in their family to attend college.
- **EOP STEM:** Program was created in order to bridge the needs of historically underrepresented students in the science, technology, engineering, and mathematics fields.
- **Black Students in Health Association (BHSA):** Undergraduate student group that serves to provide guidance to Black students interested in the health sciences, medical education, and allied health fields

Academic advisors/co-managers and peer advisors are also available to students to meet one-on-one through appointments or drop-in advising. The program is also open to any campus or student groups who request a specific pre-application workshop. In the information sessions for the general student population, the pre-application workshops emphasize the full application process and personal history statement. The transition to UC Berkeley can be difficult, so we provide students with the information and support they need to illustrate their specific lived experiences on the public health major application. Although the department does not read student applications prior to their submission, academic advisors/co-managers and peer advisors can provide general support in discussing how to explain a dip in grades or a personal/academic challenge the student has faced in the application. The public health application does not necessarily have a GPA minimum as long as the student has successfully passed the prerequisite coursework with a C- or higher.

The academic advisors/co-managers also stay involved with the Transfer Alliance Project (TAP) and Transfer Student Success Group (TSSG) on campus. These include transfer specific information sessions during Golden Bear Advising.

The Public Health Undergraduate program also maintains a prospective student email listserv for students interested in the public health major or global public health minor. The listserv receives news of any prospective student workshops and any public health opportunities available at UC Berkeley. The newsletter is sent out to prospective students, public health majors, and global public health minors. The newsletter sent through the listserv will also uplift any opportunities targeted towards any specific communities such as the Minorities in Health Conference and the new Leadership, Education, and Advancement in Undergraduate Pathways (LEAP) training program, which promotes the development of a culturally diverse and responsive health care workforce.



In the academic year, public health will often have tutoring services for the more technical courses in its curriculum, PB HLTH 142: Introduction to Probability and Statistics in Biology and Public Health and PB HLTH 150A: Introduction to Epidemiology and Human Disease.

The School of Public Health will also encourage students to apply for leadership positions within the school either as a public health peer advisor or as an undergraduate student representative on the the Faculty Council (FAC), the Undergraduate Management Committee (UGMC), School of Public Health Student Government (SPHSG), the Educational Policy and Curriculum Committee (EPCC), and/or the Diversity Inclusion Community Equity (DICE) committee.

#### Graduate Recruitment and Admissions Actions/Strategies

Using the information collected in the processes defined above, we plan to strengthen our policies, processes, and practices to attract, recruit, and retain underrepresented students by creating a cohesive equity-based outreach and recruitment admissions plan. This plan includes new and continuing actions and strategies.

#### Current/Continuing Actions & Strategies:

- Data and evaluation
  - Survey applicants and students to better understand the experiences of individuals from underrepresented backgrounds and barriers to application and enrollment.
- Outreach
  - Partner with the communications team to improve marketing materials (website, SOPHAS application, brochures, etc.) to demystify the application process and set realistic expectations for applying and enrolling,
  - Facilitate connections (via outreach events, panels, one-to-one advising) between alumni, current students, and prospective students so prospective students have an understanding of the student experience and school climate and culture, and
  - Expand networks of prospective students and establish specific pipelines for underrepresented applicants by building partnerships with minority serving institutions, community based organizations, and campus clubs; host events and attend recruitment fairs geared towards underrepresented students.
- Admissions
  - Streamline the application to make it more accessible to applicants from underrepresented backgrounds, and
  - Conduct yearly holistic review and admissions training for all application reviewers.
- Recruitment
  - Offer travel stipends for admitted students to visit campus during Spring Visit Day and Diversity Day. Diversity Day is an event hosted by the Office for Graduate Diversity and designed for graduate students from historically underrepresented backgrounds,
  - Engage current students and gather feedback about their perceptions of the campus visit, and
  - Connect admitted students with various resources that would be available to them on the UC Berkeley campus, such as the Office for Graduate Diversity, Basic Needs Center, Student Parent Center, Undocumented Student Program, Disabled Students Program, etc.
- Funding
  - Provide need-based awards and prioritize funding for students from underrepresented backgrounds, and

- Strengthen relationships with the development team to identify funding sources that best meet the needs of underrepresented students.

#### New Actions & Strategies:

- Staff support
  - Set goals specific to supporting admissions and recruiting staff's personal, professional, and team development, and
  - Identify actions to promote team sustainability and succession planning.
- Data and evaluation
  - Partner with the data analyst in the Dean's Office or educational operations units to increase capacity for analyzing admissions and evaluation data, and
  - Identify trends in program-level diversity and admissions data and see which programs are achieving DEIBJ goals and which programs require more support.
- Stakeholder engagement
  - Collect information from program/division faculty leadership via interview, survey, or a working group to better understand their enrollment goals, goals around diversity, equity, and inclusion, and how the program selects and supports students from underrepresented backgrounds, and
  - Use this information to tailor specific actions and strategies to each program to maximize success.
- Admissions
  - Document how graduate admissions committees are established for each program. Programs are encouraged to consider committees that are diverse and may be composed of faculty, staff, graduate students and/or alumni, as appropriate.
  - Develop program-tailored procedures for the holistic review and evaluation of graduate applicants, including an assessment protocol for graduate applications, both qualitative and quantitative, as applicable (e.g. evaluative criteria, rubric, checklist, rating scale, etc.),
  - Require holistic review trainings, norming sessions, or other DEIBJ trainings for student, staff, and faculty reviewers, and
  - Identify an alternative to the GRE that is more equitable, does not add barriers to applying, and provides admissions committees with the information they need to holistically evaluate an applicant.
- Funding
  - Promote and offer full coverage of in-state systemwide tuition and student services fees for California students who are also enrolled in federally recognized Native American, American Indian, and Alaska Native tribes via the Native American Opportunity Plan, and increase outreach to those populations to raise awareness about the funding opportunity.

#### ADEIBJ Strategic Framework 2022 Actions/Strategies

Each Goal of the ADEIBJ Strategic Framework 2022 identified in G1(2) has actions and strategies that will create equity within the school that will correct historical and current structures with proactive approaches centered in our values of the head, heart, hands, intuition, and wellness.

Details of activities are [linked here](#) and available in ERF G1.3.

- (4) List the actions and strategies identified that create and maintain a culturally competent environment and describe the process used to develop them. The description addresses curricular requirements; assurance that students are exposed to faculty, staff, preceptors, guest lecturers and community agencies reflective of the diversity in their communities; and faculty and student scholarship and/or community engagement activities.**

The mission of the ADEIBJ strategic framework is to strengthen the capacity of the school to recognize, respond to, and repair social and racial injustice. The school recognizes that building and sustaining a culturally component environment is a multi-pronged effort that requires activities that will create equity within the school, correcting historical and current structures with proactive approaches centered in our values of the head, heart, hands, intuition, and wellness.

HEAD	HEART	HANDS	INTUITION	WELLNESS
<b>Data Driven</b> - utilizing data to drive improvements and implementation plans to address gaps; committing BPH to improving policies and practices	<b>Belonging</b> - to increase diversity, equity, and inclusion	<b>People Development</b> - providing ongoing training and learning opportunities for all BPH faculty, staff, students and other academic employees to develop anti-racist skillset  <b>Community Engagement</b> - building authentic relationships with the community to support the community	<b>Beloved Community</b> - an inclusive, interconnected consciousness to act in the best interest of all	<b>Holistic Behavior</b> - actively build awareness and foster practices that support and sustain a fulfilling and healthy life

Details of activities are [linked here](#) and available in ERF G1.4.

**(5) Provide quantitative and qualitative data that document the school or program's approaches, successes and/or challenges in increasing representation and supporting persistence and ongoing success of the priority population(s) defined in documentation request 1.**

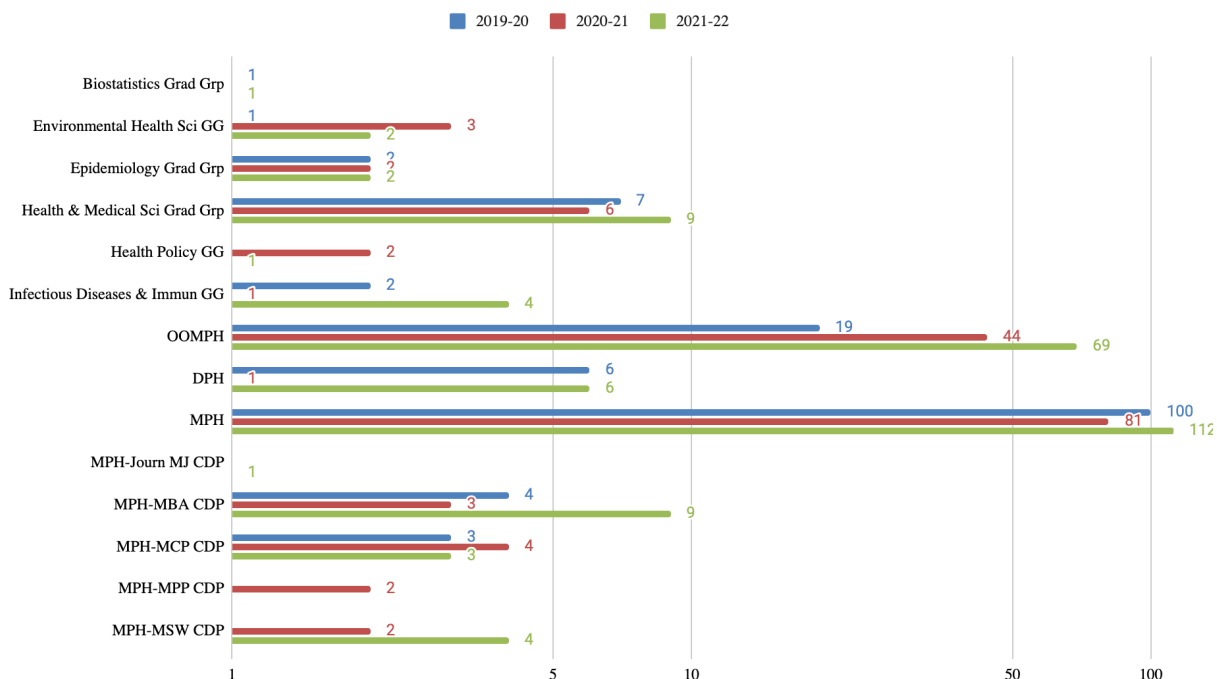
The School of Public Health regularly utilizes quantitative and qualitative data from CEPH, ASPPH, and Cal Answers as a way to assess URM growth amongst faculty, staff, and students. Student demographics are collected from SOPHAS, ASPPH, and Cal Answers. Faculty and staff demographics are collected from Cal Answers. The following paragraphs demonstrate how this data is used to review ADEIBJ strategies and related activities.

Admissions and faculty search committees are led by the academic division chair and require the input of the faculty equity advisor. Both the division chair and faculty equity advisor continue to refer to related data to assess candidates at each stage of the admissions and faculty search processes. Final selections for admissions and faculty are designated by the entire admissions or faculty search committee. Once admissions and faculty search cycles have concluded for the academic year, the administrative leadership team reviews the finalized data to assess and adjust strategies for upcoming cycles.

Staff hiring committees are led by the hiring supervisor or manager that also has final decision-making approval. The hiring supervisor or manager is required by university policy to select a diverse committee with a minimum of three members. Throughout the search process the committee implements a contribution to diversity statement prompt and/or questions acquired from a database of over 50 DEIB interview questions that addresses a range of skills such as leadership, student facing, conflicts or challenges, culture, and more.

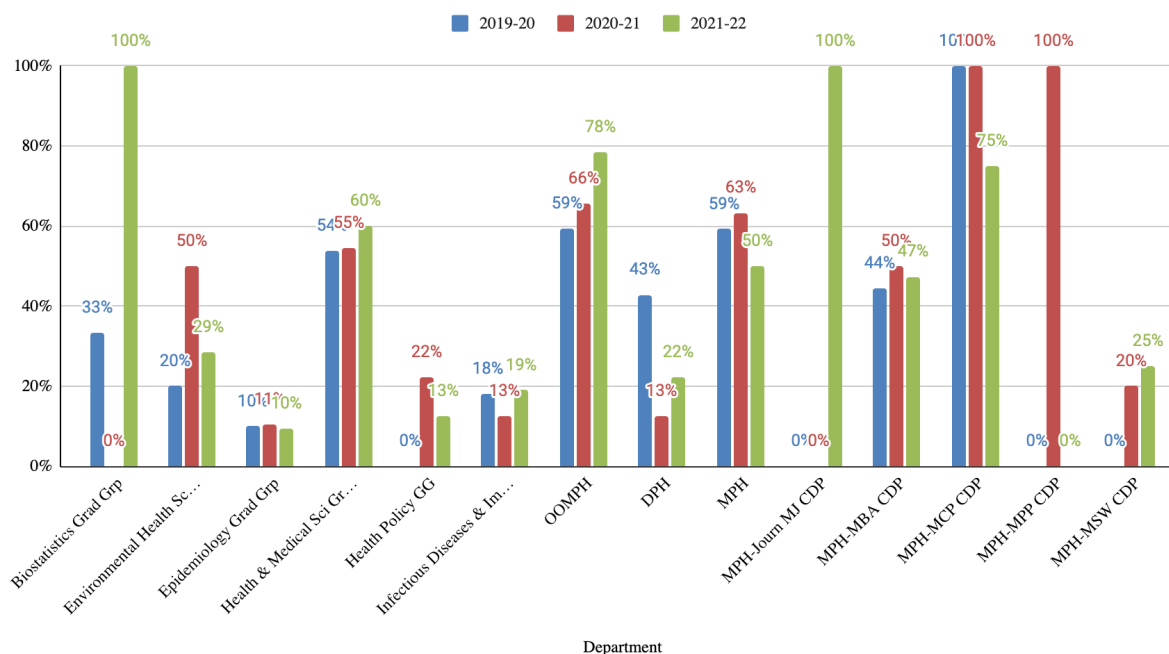
**Table G1.5.1 Graduate Student URM Admit Headcount, 2019-22**

URM Admits by Department



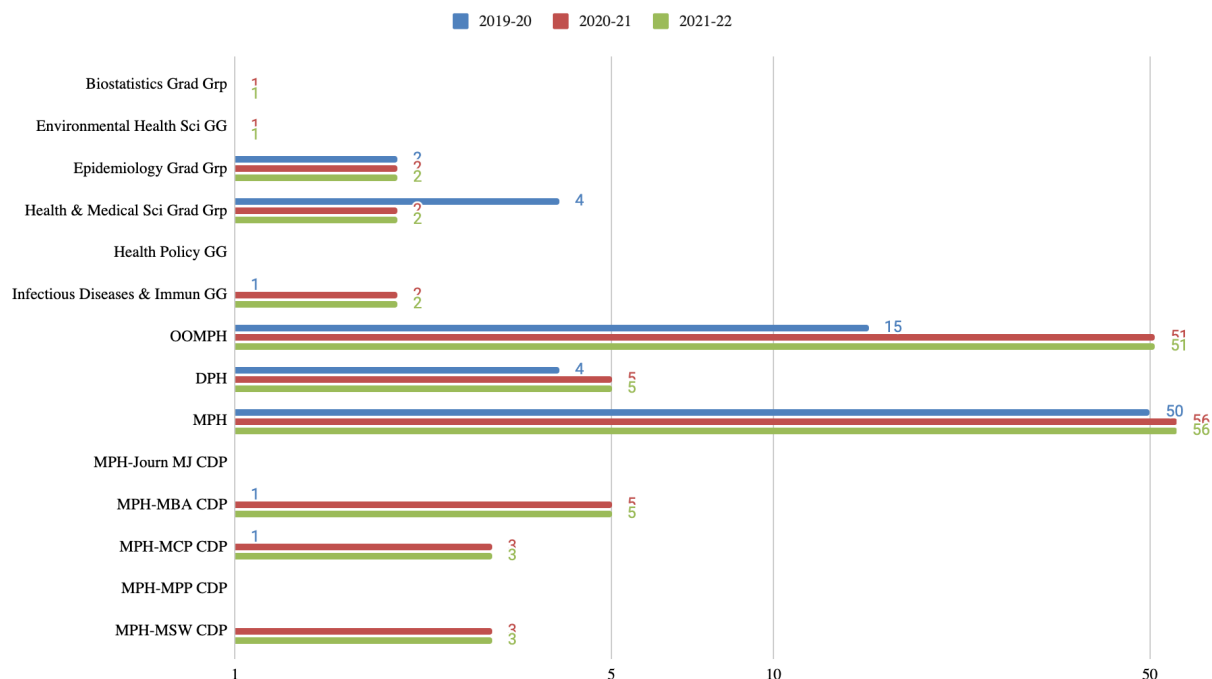
**Table G1.5.2 Graduate Student URM Admit Rates, 2019-22**

URM Admit Rate by Department (% of URM applicants who get admitted)



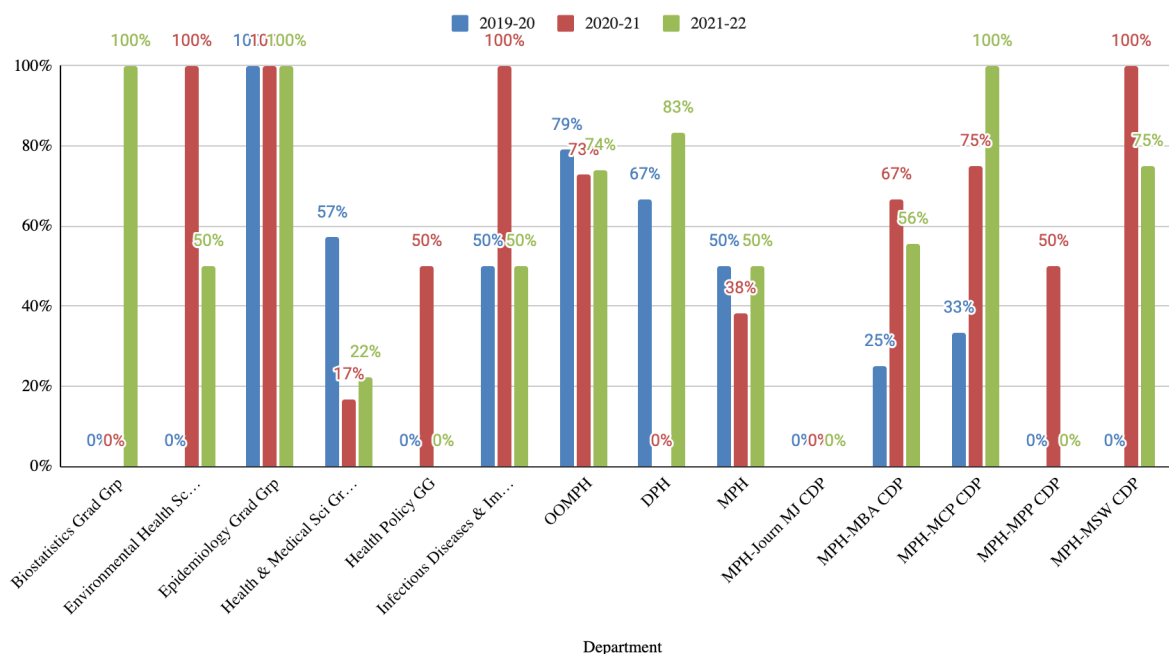
**Table G1.5.3 Graduate Student URM Yield Headcount, 2019-22**

URM Accepts by Department



**Table G1.5.4 Graduate Student URM Yield Rates, 2019-22**

URM Yield Rate by Department (% of URM offers that get accepted)



As stated in G1.1, the school defines underrepresented minority (URM) applicants and students as individuals self-reporting their race/ethnicity as American Indian/Alaska Native, Black/African American, Native Hawaiian/Pacific Islander, or Chicano/Latino. Tables G1.5.1 and G1.5.2 show the variation in URM admit headcount and admit rates by program.

Section H4.4 (Student Recruitment and Admissions) includes a bar chart showing an upward trend in the URM yield rate between 2019 (54%) and 2021 (59%) with a target of 60%. Table G1.5.4 demonstrates URM yield rate broken down by program. Programs such as Biostatistics, Epidemiology, OOMPH, DrPH, MPH/MCP, and MPH/MSW were successful in achieving the 60% target in the 2021-22 school year. Yield rate was likely impacted by the COVID-19 pandemic, and will continue to shift as the landscape of higher education shifts in response to other social and economic factors.

**Table G1.5.5 Undergraduate Student Enrollment by Gender/Ethnicity, 2019-22**

Undergraduate Enrollment		Student Fall/Spring Avg Headcount	Student Fall/Spring Avg Headcount	Student Fall/Spring Avg Headcount
Gender	Ethnicity	2019-20	2020-21	2021-22
Female	African American	20	18	17
Male	African American	7	4	1
Decline to State	Chicano/Latino			
Female	Chicano/Latino	50	47	63
Male	Chicano/Latino	18	11	15
Nonbinary	Chicano/Latino			1
Female	Native American/Alaska Native	1	3	2
Male	Native American/Alaska Native	1		1
Female	Pacific Islander		1	1
Female	Asian	150	167	158
Male	Asian	40	43	49
Nonbinary	Asian			1
Decline to State	Decline to State	1	2	
Female	Decline to State	14	13	10
Male	Decline to State	3	4	3
Female	International	9	14	9
Male	International	3		3
Female	White	73	60	52
Male	White	15	8	11
<b>URM Total</b>		<b>95</b>	<b>83</b>	<b>101</b>
<b>Grand Total</b>		<b>402</b>	<b>391</b>	<b>394</b>

**Table G1.5.6 Graduate Student Enrollment by Gender/Ethnicity, 2019-22**

Graduate Enrollment		Student Fall/Spring Avg Headcount	Student Fall/Spring Avg Headcount	Student Fall/Spring Avg Headcount
Gender	Ethnicity	2019-20	2020-21	2021-22
Female	African American	36	34	57
Male	African American	17	13	9
Decline to State	Chicano/Latino		1	3
Female	Chicano/Latino	72	78	104
Male	Chicano/Latino	23	31	36
Decline to State	Native American/Alaska Native			
Female	Native American/Alaska Native	4	5	4
Male	Native American/Alaska Native	1	3	2
Female	Pacific Islander			1
Decline to State	Asian	2	2	2
Female	Asian	126	129	154
Male	Asian	43	45	43
Nonbinary	Asian		2	5
Decline to State	Decline to State	1	2	
Female	Decline to State	37	20	19
Male	Decline to State	8	7	7
Decline to State	International			
Female	International	46	45	63
Male	International	32	31	41
Decline to State	White	2	1	3
Female	White	181	198	228
Male	White	81	76	57
Nonbinary	White			1
<b>URM Total</b>		<b>152</b>	<b>164</b>	<b>215</b>
<b>Grand Total</b>		<b>709</b>	<b>720</b>	<b>835</b>



**Table G1.5.7 Student Completions by Gender/Ethnicity, 2019-21**

Gender	Ethnicity	2019-20		2020-21	
		Count of Students	% of Total	Count of Students	% of Total
Female	African American	30	6%	24	5%
Male	African American	11	2%	5	1%
		<b>41</b>	<b>8%</b>	<b>29</b>	<b>6%</b>
Female	Chicano/Latino	51	10%	66	13%
Male	Chicano/Latino	19	4%	22	4%
		<b>70</b>	<b>14%</b>	<b>88</b>	<b>17%</b>
Female	Native American/Alaska Native	1	0%	3	1%
Male	Native American/Alaska Native	1	0%		0%
		<b>2</b>	<b>0%</b>	<b>3</b>	<b>1%</b>
Female	Asian	150	29%	149	29%
Male	Asian	37	7%	38	7%
		<b>187</b>	<b>37%</b>	<b>187</b>	<b>36%</b>
Female	Decline to State	23	4%	14	3%
Male	Decline to State	4	1%	6	1%
		<b>27</b>	<b>5%</b>	<b>20</b>	<b>4%</b>
Female	International	43	8%	36	7%
Male	International	12	2%	20	4%
		<b>55</b>	<b>11%</b>	<b>56</b>	<b>11%</b>
Decline to State	Asian		0%	1	0%
Decline to State	Decline to State		0%	2	0%
			<b>0%</b>	<b>3</b>	<b>1%</b>
Female	White	96	19%	95	18%
Male	White	34	7%	41	8%
		<b>130</b>	<b>25%</b>	<b>136</b>	<b>26%</b>
<b>URM Total</b>		<b>113</b>	<b>22%</b>	<b>120</b>	<b>23%</b>
<b>Grand Total</b>		<b>512</b>	<b>100%</b>	<b>522</b>	<b>100%</b>

Based on Tables G1.5.5 and G1.5.6, we saw a 22% increase in URM enrollment amongst undergraduates and 31% increase in URM enrollment amongst graduates between 2020 and 2021. In terms of URM representation as a percentage of the total cohort, this means a 4% increase amongst undergraduates and 3% increase amongst graduates between 2020 and 2021.

Based on Table G1.5.7, we saw 6% more URM graduates in 2020-2021 (120) compared to prior year (113). This represents 23% of total graduates in 2020-2021, which is a slight increase compared to 2019-2020 (22%).

**Table G1.5.8 Staff and Non-Faculty Academic Employees by Gender/Ethnicity, 2019-21**

<b>Staff and Non-Faculty Academic Employees by Gender</b>	<b>Head Count 2019 Oct</b>	<b>Head Count 2020 Oct</b>	<b>Head Count 2021 Oct</b>
Female	184	167	173
Male	65	58	59
Transgender/Gender Non-Conforming	1	3	3
Unknown	2	27	19
<b>Grand Total</b>	<b>252</b>	<b>255</b>	<b>254</b>

<b>Staff and Non-Faculty Academic Employees by Ethnicity</b>	<b>Head Count 2019 Oct</b>	<b>Head Count 2020 Oct</b>	<b>Head Count 2021 Oct</b>
2 or More Races - Non-URM	6	3	2
2 or More Races - URM	1		1
African American / Black	10	12	12
Asian	53	51	53
Chicano / Latino	39	38	37
Decline to State	1	5	6
Native American / Alaska Native	1	2	2
Unknown	21	24	14
White	120	120	127
<b>URM Total</b>	<b>51</b>	<b>52</b>	<b>52</b>
<b>URM % of Total</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>
<b>Grand Total</b>	<b>252</b>	<b>255</b>	<b>254</b>

Table G1.5.8 indicates that the school's staff URM populations, representing 20% of total staff, have remained stable over the past three years. It should be noted that in April 2020, Dean Lu was the first dean at UC Berkeley to announce that there will be no staff layoffs despite the financial crisis caused by COVID-19, which would have disproportionately affected BIPOC staff. Another data point that shows growth in our headcount of staff that identify as transgender and nonbinary. This observation is a primary factor of our *ADEIBJ Strategic Framework 3.2 Attract, hire and retain invisibilized and absent faculty, other academics, and staff by strengthening ADEIBJ processes and practices.*

**Table G1.5.9 Faculty by Gender/Ethnicity, 2019-21**

Faculty by Gender	Head Count	Head Count	Head Count
	2019 Oct	2020 Oct	2021 Oct
Female	72	66	76
Male	56	51	50
Unknown	0	12	16
<b>Grand Total</b>	<b>128</b>	<b>129</b>	<b>142</b>

Faculty by Ethnicity	Head Count	Head Count	Head Count
	2019 Oct	2020 Oct	2021 Oct
2 or More Races - Non-URM	1	1	2
2 or More Races - URM	2	2	2
African American / Black	10	8	11
Asian	16	16	20
Chicano / Latino	8	9	12
Decline to State	1	0	1
Unknown	5	8	8
White	85	85	86
<b>URM Total</b>	<b>20</b>	<b>19</b>	<b>25</b>
<b>URM % of Total</b>	<b>16%</b>	<b>15%</b>	<b>18%</b>
<b>Grand Total</b>	<b>128</b>	<b>129</b>	<b>142</b>

In 2020, the school updated its faculty search plan, trained faculty equity advisors in diversity practices for faculty searches, and joined the first university faculty cluster hire efforts. Table G1.5.9 shows these changes resulted in the addition of six URM faculty from 2020 to 2021, as well as a URM faculty becoming the first URM to chair the epidemiology division. The chart also shows a slight increase of the URM percentage in our faculty from 16% to 18%. Thus far, the *ADEIBJ Strategic Framework 3.2 Attract, hire and retain invisibilized and absent faculty, other academics, and staff by strengthening ADEIBJ processes and practices* is creating inclusivity within BPH faculty.

**(6) Provide student and faculty (and staff, if applicable) perceptions of the school or program's climate regarding diversity and cultural competence.**

**G1.6 UC Berkeley School of Public Health uses a series of assessment tools to gauge climate and cultural competence within the school: annual climate survey, pulse surveys, course evaluations, and the Fall 2020 Baseline Anti-Racism Survey.**

**G1.6A Annual Climate Survey**

The annual school climate survey is a 40-item questionnaire provided to all faculty, other academics, staff, and students. It was developed by the Diversity, Inclusion, Community, Equity Committee (DICE) which is a collective body of faculty, other academics, graduate students, staff, and undergraduate students. The survey is offered once per year and designed to help the school have a better grasp of its climate. Climate is defined as the current attitudes, behaviors, and standards of faculty, staff, administrators, and students concerning the level of respect for individual needs, abilities, and potential. Responses remain anonymous and qualitative and aggregate quantitative results are shared with the community.

**Key Results from the Annual Climate Survey 2016-19**

- **DEIBJ:** discrimination by position & race/ethnicity continues.
- **Mental health:** disconnect between how faculty and staff thought they prioritized mental health versus their actual treatment of students struggling with mental health issues.
- **Community:** Lack of opportunities for creating and strengthening community within the school.

As a result of these findings, Dean Lu and his leadership team took actions focused on advancing DEIBJ and anti-racism, promoting mental health and well-being, and supporting community building. The school also switched from an annual climate survey to more frequent pulse surveys (G1.6B), which yield more real-time data to drive real-time improvements.

**G1.6B Pulse Surveys**

Pulse surveys are a series of shorter and more frequent questionnaires used as a method of “continuous quality improvement” by collecting real-time data and making adjustments based on that data. The surveys address a myriad of relevant topics, including inclusion and ADEIBJ in course curriculum. Below are the two questions that have been asked and the corresponding results.

- a. How well have your courses fostered a respectful and inclusive environment?

This question was added to the student pulse surveys after the first Faculty Anti-racism Pedagogy Leadership Academy, during which 60 faculty teaching breadth courses updated their course syllabi to reflect more ADEIBJ content. Based on the table below an average of 88% of respondents scored courses at a 4 or higher in response to courses fostering a respectful and inclusive environment.

**Table G1.6.1 Student Pulse Surveys: Week 4 Fall 2021 and Spring 2022**

Graduate Student Response	Value	F21 W4	F21 W4	S22 W4	S22 W4
1=not at all 5=very high degree	1	0	0%	2	1%
	2	2	1%	5	3%
	3	4	2%	16	10%
	4	59	27%	61	38%
	5	150	70%	77	48%
	Total	215	100%	161	100%
	No response	2		3	

Undergraduate Student Response	Value	F21 W4	F21 W4	S22 W4	S22 W4
1=not at all 5=very high degree	1	1	0%	3	3%
	2	5	2%	0	0%
	3	19	7%	10	10%
	4	107	41%	38	37%
	5	131	50%	51	50%
	Total	263	100%	102	100%
	No response	4		4	

- b. If you have had course content centered on topics related to diversity, equity, inclusion, and/or anti-racism, has the content offered had an impact on your mental health and emotional well-being? If so, how?

This question was added to the student pulse surveys in week 10 for fall 2021 and spring 2022 after the first Faculty Anti-racism Pedagogy Leadership Academy during which 60 faculty teaching breadth courses updated their course syllabi to reflect more ADEIBJ content. An average of 54.17% of respondents had a course centered on ADEIBJ topics and had an impact on their mental health and social well-being. The comment areas also provided four areas of positive change for students: broadened student's perspective, felt seen, increased awareness, and made a positive impact. Further detail is provided in ERF G1.6.

### G1.6C Course Evaluations

Course evaluations are designed for faculty to obtain student feedback to inform changes to a course coupled with being used for faculty merit and promotion reviews. The school utilizes two questions below regarding school culture and climate. The course evaluation asks students to rate instructor engagement and climate from one to seven (seven being the highest rating).

Data since summer 2020 show an average mean instructor engagement score of 6.62 and average median instructor effectiveness score of 6.92 for faculty, and an average mean instructor engagement score of 6.36 and average median instructor effectiveness score of 6.97 for GSIs. For faculty, the average mean climate score is 6.58 and average median instructor effectiveness score is 6.90. For GSIs, the average mean instructor engagement score is 6.48 and average median instructor effectiveness score is 6.97 for GSIs.

- **Instructor Engagement:** How well did the instructor engage respectfully with ALL the students, and the students' values and priorities presented in class?
- **Climate:** We define CLIMATE as current attitudes, behaviors, and standards held by faculty, staff, and students concerning the access for, inclusion of, and level of respect for individuals. How comfortable were you with the climate of the class?

**Table G1.6.3 Average of Instructor Engagement Scores**

Semester	Average of Instructor Engagement (Faculty) - Mean	Average of Instructor Engagement (Faculty) - Median	Average of Instructor Engagement (GSI) - Mean	Average of Instructor Engagement (GSI) - Median
Summer 2020	6.45	7.00	4.49	6.96
Fall 2020	6.65	6.92	6.66	6.95
Spring 2021	6.6	6.83	6.60	6.93
Summer 2021	6.64	7.00	6.61	7.00
Fall 2021	6.70	6.93	6.61	6.97
Spring 2022	6.62	6.85	6.57	6.96
Summer 2022	6.61	6.92	6.66	7.00
Fall 2022	6.65	6.87	6.65	6.95
Running Avg	<b>6.62</b>	<b>6.92</b>	<b>6.36</b>	<b>6.97</b>

**Table G1.6.4 Average of Climate Scores**

Semester	Average of Climate (Faculty) - Mean	Average of Climate (Faculty) - Median	Average of Climate (GSI) - Mean	Average of Climate (GSI) - Median
Summer 2020	6.54	7.00	5.85	7.00
Fall 2020	6.59	6.9	6.60	6.98
Spring 2021	6.56	6.82	6.60	6.99
Summer 2021	6.56	7.00	6.55	7.00
Fall 2021	6.62	6.90	6.58	6.96

Semester	Average of Climate (Faculty) - Mean	Average of Climate (Faculty) - Median	Average of Climate (GSI) - Mean	Average of Climate (GSI) - Median
<b>Spring 2022</b>	6.53	6.84	6.49	6.92
<b>Summer 2022</b>	6.65	7.00	6.59	7.00
<b>Fall 2022</b>	6.57	6.84	6.60	6.94
<b>Running Avg</b>	<b>6.58</b>	<b>6.90</b>	<b>6.48</b>	<b>6.97</b>

### **G1.6D Fall 2020 Baseline Anti-Racism Survey**

The initial stage of the school's anti-racism process began with the Fall 2020 baseline anti-racism survey. This was a one-time survey administered via email to all academics, faculty, staff, and students to gain perspectives on the school as an anti-racist institution. The survey was intended to gauge: 1) individual knowledge, attitudes, practices, and self-efficacy that informed individual readiness to engage in anti-racist pedagogy and racial equity praxis, and 2) perceptions of UC Berkeley School of Public Health as an anti-racist institution.

Survey results offered two significant takeaways: 1) students were more likely than other members of the community to identify as targets of racial mistreatment, and 2) student were more motivated to learn and employ anti-racism techniques than other members of our community

Based on these results, the school established the Student Experience Workgroup, co-chaired by the assistant dean for students and chief of diversity, equity, inclusion, and belonging. The group established a project charter and achieved the following goals:

- 1) Student-focused anti-racism education through the implementation of the Antiracism Graduate Student Elective course, so far taken by over 60 students,
- 2) Anti-racism content and behaviors incorporated into course syllabi and curriculum through the Faculty Anti-racism Leadership Pedagogy Academy, so far completed by 120 faculty members,
- 3) Strengthening the environmental health sciences required breadth course to incorporate anti-racism community agreements.

#### **(7) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: The school's mission is to improve population health, especially for the most vulnerable, alongside our vision of healthy equity and social justice for all. This criterion heavily demonstrates how we intentionally and diligently are doing the work to create social and racial equity in and outside of our school. We are proud of how our model of shared governance, current and future activities, assessment tools, and ADEIBJ strategic framework continue to move the school in the direction of our new schoolwide strategic plan: advance anti-racism, diversity, equity, inclusion, belonging, and justice.

Plans for Improvement: During May 2022, the initial version of the ADEIBJ strategic framework was presented to three focus groups of faculty, other academics, staff, and students. At that time a MIRO board collaboration tool was used to garner feedback about "what is missing" for each of the four objectives and corresponding strategies. Upon review of feedback, four themes emerged: collective accountability, increased sense of belonging, building trust, and disaggregated data for all academics, faculty, staff, and students.

#### **Collective Accountability**

The School of Public Health defines collective accountability as supporting each other in understanding and embracing our responsibility to address, repair, and prevent harm within our public health community and the communities we work with and reside in. Two examples of our weaknesses in this area are:

- Academic divisions should develop individual ADEIBJ plans in alignment to the ADEIBJ Strategic Framework
- Accountability process for racism within the school and for faculty is not strong



## **Belonging**

One of our principles of community states, “We value everyone in our community. We are committed to creating a safe environment where each person can show up every day exactly as they are, and we value them as individuals and for their contributions to our community.” Despite this being a guiding principle, two examples of how we can improve belonging are:

- Demonstrate that lived experiences, indigenous, multiracial, and other academics are valuable in the school.
- Co-curricular experiences that build a schoolwide connection.

## **Building Trust**

Reviewing all of the schoolwide assessment tools for ADEIBJ, trust was never queried, yet it is heavily implied in a majority of feedback. Typically it surfaces in language referencing power, hierarchies, and a need for a place to report incidents of harm or bias. The school has seen this evidenced by feedback such as the following examples:

- Transparency in both successes and shortcomings of the school related to ADEIBJ.

## **Disaggregated Data**

Stated at the start of this section, the school defines URM applicants and students as individuals self-reporting their race/ethnicity as American Indian/Alaska Native, Black/African American, Native Hawaiian/Pacific Islander, or Chicano/Latino. However, our community has requested disaggregated data to better understand which communities are underrepresented in the school and the field of public health and may be more structurally vulnerable to the social determinants of health.

Collective accountability, increased sense of belonging, and building trust will be assessed utilizing triannual climate pulse surveys each academic year for continuous improvement. These surveys will be administered to all faculty, other academics, staff, and students. Disaggregated data will involve a deeper inquiry into the existing reporting requirements for ASPPH, Cal Answers, CEPH, and IPEDS in comparison with the data collected to develop a more comprehensive reporting structure for the BPH community.

---

## H1. Academic Advising

---

**The school or program provides an accessible and supportive academic advising system for students. Each student has access, from the time of enrollment, to advisors who are actively engaged and knowledgeable about the school or program's curricula and about specific courses and programs of study. Qualified faculty and/or staff serve as advisors in monitoring student progress and identifying and supporting those who may experience difficulty in progressing through courses or completing other degree requirements. Orientation, including written guidance, is provided to all entering students.**

**(1) Describe the orientation processes. If these differ by degree and/or concentration, provide a brief overview of each.**

All graduate students who attend UC Berkeley School of Public Health are invited and strongly encouraged to participate in campus-level orientation activities that are offered by the Graduate Division. These events are typically offered during the week prior to the start of instruction. The Graduate Division orientation activities are meant to serve as an additional orientation designed to supplement orientations that are held by departments, schools, or programs. The New Graduate Student Orientation activities include virtual workshops on topics such as graduate peer support, introductions to the Office of Graduate Diversity, student legal services, introduction to the Graduate Assembly, welcomes from the chancellor and dean of the Graduate Division, and other sessions that highlight the resources and supports that are available to graduate students at UC Berkeley. In addition to virtual events, there are in-person social events that provide an opportunity for graduate students across disciplines to meet one another and build community.

The School of Public Health annually offers a New Student Orientation to welcome our new students and introduce them to the community. This event typically occurs on the Monday before the start of instruction and includes welcomes from the dean, dean of the Graduate Division, and the assistant dean for students. We also provide a series of topical breakout sessions for students so they can meet other students and learn about services and opportunities available to them. In 2022, our breakout sessions included: library services, data services, mental health supports, concurrent program meetups, and doctoral program meetups. We provide a lunch and opportunity for students to meet with faculty, staff, and other students.

The afternoon sessions include breakout sessions where students have the opportunity to meet their cohort, the faculty, and learn about their specific program(s). Each program provides a series of other opportunities for students to build community within their cohort and across their program.

In addition to the Monday orientation activities, we also host a three-hour virtual anti-racism workshop for incoming students. This session helps incoming students learn about basic concepts and language that we use related to anti-racism. We do evaluations of New Student Orientation and adjust our programming based on feedback each year. This ensures that we are being responsive to student feedback and continuously improving our services. Students also participate in orientation activities specific to their programs, during which program representatives host social events and provide an overview of degree requirements, program policies, student resources, and research and service opportunities. Notable activities from each program include:

- Environmental Health Sciences Division
  - Faculty and research presentation to first-year students held before New Student Orientation; faculty and researchers discuss the courses they teach and research opportunities available to students.
  - Master's program session during New Student Orientation.
  - Fall Welcome Back Event for all EHS division students, faculty, and staff.
- Epidemiology Division
  - 11-Month Epidemiology MPH
    - In the summer before New Student Orientation, students are enrolled in PB HLTH 299: Summer Seminar. In the first few sessions, program staff attend to share program information, introduce students to campus resources and facilities, and answer questions. Program faculty directors also introduce the master's paper/capstone process.
  - 2-Year Epidemiology/Biostatistics MPH
    - Each incoming first-year student is paired with a second-year student buddy. The graduate advisor coordinates the matches based on similar research interests and backgrounds, and encourages buddies to connect during the summer before the start of the program.
  - 4+1 Epidemiology/Biostatistics MPH
    - Social event for incoming and continuing students in the spring semester preceding the incoming students' first official semester as graduate students.
    - Session in May preceding the incoming students' first official semester as graduate students introducing them to the master's paper/capstone process.
- Biostatistics Division
  - Program town hall at the beginning of each school year. The town hall is preceded by a survey sent to incoming and continuing students to address student concerns about the program, school, and student life (financial stability, mental health, etc.).
  - Welcome back reception after the program town hall, hosted by program staff.
  - Happy hour hosted by the biostatistics student association after new student orientation.

- Community Health Sciences Division
  - Health and Social Behavior
    - Program session during New Student Orientation.
    - Each incoming first-year student is paired with a second-year student buddy.
  - Maternal, Child, and Adolescent Health
    - Program session during New Student Orientation.
    - MCAH New Student Leadership Retreat: Incoming 11-Month, 2-Year, and MSW/MPH MCAH students engage in activities to deepen their skills and knowledge of the MCAH leadership competencies that include, but are not limited to, cultural humility, conflict resolution, and effective communications.
    - All students complete the MCAH navigator self-assessment, an online tool that can help students identify their strengths and learning needs, match their learning needs to appropriate trainings, and receive a personalized learning plan.
    - Each incoming first-year student is paired with a second-year student buddy.
  - Public Health Nutrition
    - Program session during New Student Orientation.
    - Each incoming first-year student is paired with a second-year student buddy.
- Health Policy and Management Division
  - 2-Year MPH, 11-Month MPH, MPP/MPH, MBA/MPH
    - New student welcome brunch held the weekend before New Student Orientation.
    - During group advising, students are introduced to the student handbook and program-specific processes, such as schedule change requests.
  - 2-Year MPH, 11-Month MPH, MPP/MPH
    - Advising session with the faculty program director and program manager in early July before fall registration.
    - Individual advising meetings with faculty program director or program manager.
    - Practicum showcase in early fall, at which continuing students share their summer practicum experiences.
  - MBA/MPH
    - Individual advising meetings with the faculty program director.
    - Students take an MBA class with the faculty program director and receive advising during the first week of instruction.
  - PhD
    - Advising session with the faculty program director and program manager in early July before fall registration.
    - Individual advising meetings with faculty advisors.
    - Facilities walkthrough and degree milestone orientation with program manager during the first week of instruction.
    - Welcome social for incoming students hosted by continuing PhD students.

- Interdisciplinary Division
  - MPH
    - PB HLTH 292: Summer Interdisciplinary Seminar focuses on team building, understanding program requirements, engaging with alumni to learn from their experiences during their MPH studies and as public health professionals, receiving guidance for campuswide selection of elective courses, and discussing principles of community engagement.
- Infectious Disease and Vaccinology
  - MPH
    - Advising session with program manager in July before fall registration.
    - Program session during New Student Orientation.
    - Each incoming first-year student is paired with a second-year student buddy.
    - New student welcome lunch and social held during the week of New Student Orientation.
    - Program breakout session during New Student Orientation, which includes an introduction to the student handbook.
    - Each incoming first-year student is paired with a faculty advisor for individual academic advising.
  - PhD
    - Advising session with program manager in July before fall registration.
    - Advising session and degree milestone with the faculty program director at New Student Orientation.
    - Individual advising meetings with faculty program director.
    - Welcome social for incoming students hosted by continuing PhD students.
- Doctor of Public Health
  - Program session presented by DrPH Leadership with a student panel is offered during New Student Orientation
  - Each incoming first-year student is paired with a second- and third-year student buddy.
  - Each incoming first-year student is paired with a faculty advisor and program advisor.
  - Welcome social is hosted by DrPH for students, faculty, staff, and alumni.
- Online MPH

The Online MPH program facilitates two virtual orientations for the fall and spring incoming cohort. Orientations are conducted over a one-week period. The sessions begin with small breakouts, which allow students to meet their cohort and faculty advisor and learn more in detail about their concentration. There are multiple breakout sessions. In addition, the Online MPH program hosts a larger virtual event focused on orienting the students with introductions of students, staff, and faculty members; course planning; program logistics; navigating different systems; instructions on how to register for classes; community building through student organizations. All events are recorded.

- Undergraduate Program

All undergraduate students newly admitted to the Public Health major are invited to participate in the New Student Orientation offered by the academic advisors after the fall and spring application cycles. These events are typically offered during the first week of instruction.

In Fall 2019, this orientation was in person but has since moved to an online format. In the orientation, students are introduced to program staff, peer advisors, faculty, and school leadership. There is also a presentation on curriculum requirements, academic policies, library services, and resources. At UC Berkeley, there is a larger campus Golden Bear Orientation for incoming undergraduate first-year or transfer students. New Student Services hosts the orientation to provide each student the support and resources needed for a successful transition to the Berkeley campus.

**(2) Describe the school or program's academic advising services. If services differ by degree and/or concentration, a description should be provided for each public health degree offering.**

Graduate Programs

Each student has a faculty advisor in their area of concentration who is prepared to discuss the student's program of study, academic progress, and career goals. It is the faculty advisor's responsibility to assist the student in developing an optimal program that meets the requirements for the degree and ensures sufficient flexibility to meet the student's individual goals. Faculty advisors are expected to be available to advise students during orientation week, early in each student's first semester, and at least once per semester for most programs.

In addition to faculty advisors, program staff provide advising on degree requirements and other student resources. Graduate Student Affairs Officers (GSAOs) are responsible for the administrative advising of graduate students. For example, GSAOs remind students about registration and fellowship deadlines, stay abreast of university requirements, and manage requisite administrative paperwork. Program managers' responsibilities include advising students on enrollment policies and procedures, and tracking and reviewing students' progress on degree requirements. Program managers, GSAOs, and faculty program directors host regular check-ins with students and are available for one-on-one advising appointments. Program staff also send announcements throughout the semester so that students are aware of upcoming deadlines and resources for academic and professional development and student well-being. In the Health Policy and Management division and Environmental Health Sciences program, group advising sessions attended by all students, faculty advisors, the faculty program director, and the program manager are intended to prepare students for course registration in the next semester.

Undergraduate Program

The Academic Advisors are also the managers of the undergraduate program. The academic advisors for the Public Health undergraduate program offer remote and in-person advising services for currently declared undergraduate students, prospective Public Health majors and Global Public Health minors, and prospective transfer students. They provide support for declared majors hoping to facilitate a student-led seminar on a Public Health topic. Academic Advisors are available for one-on-one advising appointments, drop-in hours, and can be contacted through email.

These advisors will also select and train a cohort of peer advisors, typically Public Health majors in their senior year, to provide peer support to prospective and declared Public Health majors and Global Public Health minors. Peer advisors may host community events and workshops. Academic advisors will support a group of student representatives who participate in larger school committees such as the Undergraduate Management Committee and Berkeley School of Public Health Student Government.

Academic advisor responsibilities include advising students on Public Health major application requirements and instructions, advising students on enrollment policies and procedures in Public Health courses, organizing and completing administrative paperwork, tracking and reviewing students' progress

on degree requirements, and hosting New Student Orientation for newly admitted majors. Academic Advisors will work on program plans with students who plan to study abroad, apply to the 4+1 MPH, complete an honors thesis, or plan to add another major or minor. The advisors will identify students with academic progression problems and recommend interventions as needed. The academic advisor supports and advises faculty on departmental, school, college and university policies and procedures. Academic advisors work with the faculty advisors of the Public Health student-led seminars (Democratic Education Program courses or DeCals) and honors thesis mentors to prepare and train them on the responsibilities for their respective roles.

Academic advisors also create a weekly newsletter with important academic deadline information, internship opportunities, and on-campus and off-campus student events.

### **(3) Explain how advisors are selected and oriented to their roles and responsibilities.**

#### Graduate Programs

For MPH and academic master's programs, faculty advisors are assigned to incoming students by the faculty program director based on each student's research and professional interests and faculty availability. Some programs, including 4+1 Epidemiology/Biostatistics and Maternal, Child and Adolescent Health (MCAH), also have students complete a survey to help inform the advisor assignment. For PhD programs, faculty advisors are identified during the admissions process based on interests and funding opportunities, and indicated in the admission offer letter. Near the start of the students' first semester, faculty are informed who their incoming advisees will be and students receive an email requesting that they initiate an introductory meeting with their faculty advisor.

Programs document the roles and responsibilities of faculty advisors in their student handbooks and other handouts shared with faculty. For faculty advisors new to the role, the faculty program director meets with the new advisor to discuss advisor responsibilities and introduce advising resources.

#### Undergraduate Programs

Undergraduate faculty advisors for the Public Health student-led seminars (Democratic Education Program courses or DeCals) are identified by the undergraduate students that will facilitate the course. Academic advisors support the course proposal approval process by advising faculty advisors or instructors of record on the creation of the course syllabus and course proposal paperwork. Faculty advisors for these DeCal courses (course numbers PBHLTH 198) will be trained on how to support course management, create the course online platform, and address any course issues (enrollment, grades, etc.), as needed. The academic advisors will provide guidance on how to manage the independent study or research units for the student course facilitators as well as how to manage inputting grades for both the student course facilitators and the enrolled students in the DeCal.

Students pursuing the Public Health senior honors thesis program work closely with a faculty advisor to begin and complete their research. The faculty advisor signs a memorandum of understanding confirming their role and responsibility to the student as an honors thesis mentor. The honors thesis mentor will oversee the student's progress in writing their thesis and will review, comment on, and sign off on the student's thesis. At the end of the year, mentors provide the grade for the student's thesis work.

The honors thesis program coordinator (one of the academic advisors/comanagers of the program) will check in with the honors thesis mentor once a semester to track student progress in the honors thesis program. If there are any concerns, the program coordinator will connect the Honors Thesis mentor with that year's honors thesis program instructor.

The honors thesis program instructor teaches PB HLTH 155A: Senior Research Seminar in Public Health and provides additional support to the honors thesis program cohort through the fall semester PH 195A and spring semester PH 195B Special Study for Honors Candidates courses.



**(4) Provide a sample of advising materials and resources, such as student handbooks and plans of study, that provide additional guidance to students.**

Documents are available in ERF H1.4.

**(5) Provide data reflecting the level of student satisfaction with academic advising during each of the last three years. Include survey response rates, if applicable. Schools should present data only on public health degree offerings.**

**Table H1.5.1 Exit Survey - Graduate Students 2021**

<b>Academic Advising</b>						
<b>Please rate your level of satisfaction with your faculty advisor in the following category:</b>	<b>Very Dissatisfied</b>	<b>Dissatisfied</b>	<b>Neutral</b>	<b>Satisfied</b>	<b>Very Satisfied</b>	<b>Not Applicable</b>
Availability and accessibility	1%	3%	8%	24%	62%	3%
Knowledge of their field			1%	17%	75%	7%
Knowledge of Public Health			1%	20%	71%	8%
Sensitivity to issues of privilege, racism, power		1%	8%	22%	61%	8%
Assistance with your research	1%	3%	8%	29%	42%	17%
Opportunity to participate in advisor's research)	4%	8%	9%	9%	42%	28%
Openness to alternative viewpoints	1%		12%	17%	58%	12%
Career advice	1%	5%	13%	21%	49%	11%

**Table H1.5.2 Exit Survey - Graduate Students 2022**

<b>Academic Advising</b>						
<b>Please rate your level of satisfaction with your faculty advisor in the following categories:</b>	<b>Very Dissatisfied</b>	<b>Dissatisfied</b>	<b>Neutral</b>	<b>Satisfied</b>	<b>Very Satisfied</b>	<b>Not Applicable</b>
Availability and accessibility	2%	7%	8%	23%	56%	3%
Knowledge of their field	0%	1%	3%	18%	75%	3%
Knowledge of Public Health	0%	1%	4%	17%	75%	3%
Assistance with your research	3%	7%	9%	12%	42%	27%
Opportunity to participate in advisor's research	6%	6%	7%	5%	33%	43%
Openness to alternative viewpoints	2%	3%	6%	20%	58%	11%
Career advice	3%	6%	7%	18%	50%	15%
Sensitivity to issues of privilege, racism, power	1%	2%	9%	18%	63%	7%

According to the 2021 and 2022 annual exit survey, over 90% of our graduate respondents consistently indicated that they are "satisfied" or "very satisfied" with academic advising in terms of the knowledge of their faculty advisor in their specific field and in general in the field of Public Health. Over 80% of respondents consistently are "satisfied" or "very satisfied" with their faculty advisors in relation to "sensitivity to issues of privilege, racism, power". The Exit Survey had a 66% response rate from graduate

students in 2022 and 35% response rate in 2021. With no in-person graduation ceremony in 2021 due to the pandemic, the usual incentive of graduation tickets could not be offered to complete the survey, contributing to the lower survey response rate in 2021.

**Table H1.5.3 Exit Survey - Undergraduate Students 2021**

<b>Academic Advising</b>					
<b>Q4.2 - Please rate your level of satisfaction with the advising from the Public Health academic advisors in helping you to:</b>	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Select courses	5%	2%	16%	19%	58%
<b>Help with research opportunities</b>	20%	11%	23%	16%	13%
Learn about career options	2%	4%	27%	27%	40%
Referrals to appropriate resources (i.e., journals, libraries, meetings and internships etc.)	4%	4%	26%	24%	41%
Provide networking contacts	4%	4%	31%	22%	38%
Establish plan to complete the major	2%	2%	9%	17%	70%
<b>Q4.5 - Please rate your level of satisfaction with the advising from the Public Health faculty and/or GSIs in helping you to:</b>	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Select courses	2%	2%	36%	21%	38%
Help with research opportunities	2%	2%	32%	17%	46%
Learn about career options	2%	5%	19%	23%	51%
Referrals to appropriate resources (i.e., journals, libraries, meetings and internships, etc.)	2%	2%	17%	26%	52%
Provide networking contacts	2%		33%	26%	38%

**Table H1.5.4 Exit Survey - Undergraduate Students 2022**

<b>Academic Advising</b>					
<b>Q4.2 - Please rate your level of satisfaction with the advising from the Public Health academic advisors in helping you to:</b>	Very Dissatisfied	Dissatisfied	Neutra	Satisfied	Very Satisfied
Select courses	1%	2%	19%	33%	45%
<b>Help with research opportunities</b>	2%	5%	41%	27%	25%
Learn about career options	1%	3%	35%	32%	29%
Referrals to appropriate resources (i.e., journals, libraries, meetings and internships, etc.)	2%	2%	34%	34%	28%
<b>Provide networking contacts</b>	2%	6%	41%	28%	23%
Establish plan to complete the major	1%	2%	8%	36%	53%
<b>Q4.5 - Please rate your level of satisfaction with the advising from the Public Health faculty and/or GSIs in helping you to:</b>	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied

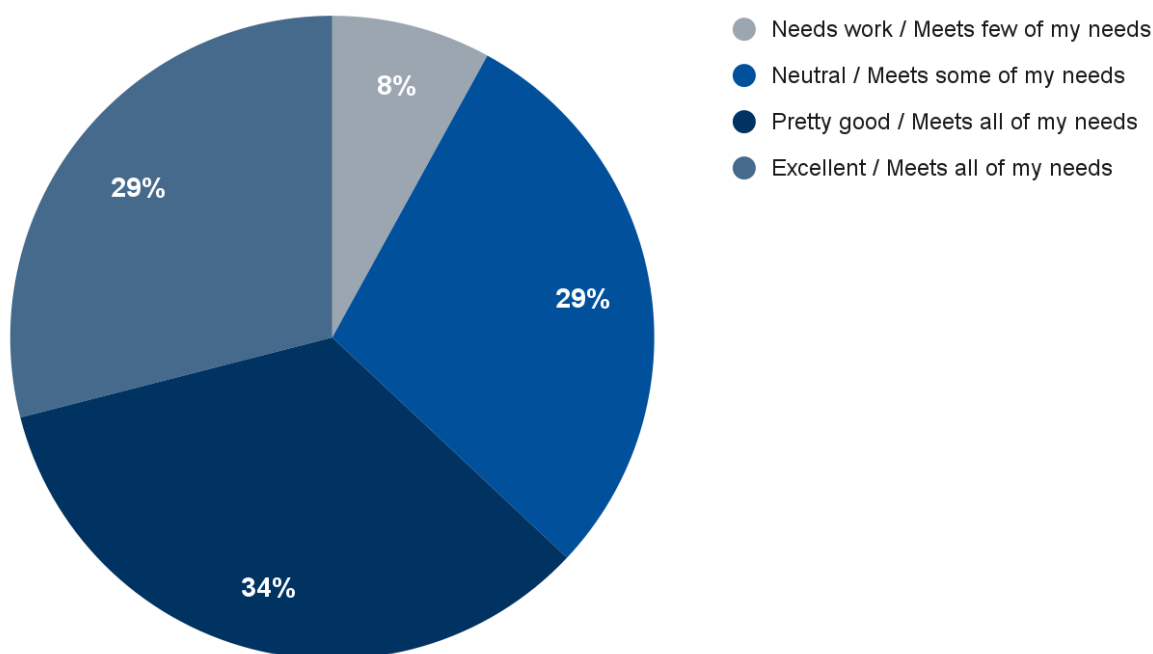
<b>Help with research opportunities</b>	2%	6%	36%	30%	26%
Learn about career options	1%	3%	31%	32%	32%
Referrals to appropriate resources (i.e., journals, libraries, meetings and internships, etc.)	1%	4%	37%	32%	25%
Provide networking contacts	1%	6%	35%	34%	24%

According to the 2021 and 2022 annual exit survey, over 50% of our undergraduate respondents indicated that they are "satisfied" or "very satisfied" with advising from public health academic advisors, faculty, and/or GSIs in all categories with the exception of research opportunities. Of note, favorable responses grew year-over-year to 91% for establishing a plan to complete the major and 78% for selecting courses related to academic advising. Lower percentage of satisfaction with "help with research opportunities" can be attributed to the fact that few of our undergraduates are involved in academic research. The Exit Survey had a 71% response rate from undergraduate students in 2022 and 30% response rate in 2021. With no in-person graduation ceremony in 2021 due to the pandemic, the usual incentive of graduation tickets could not be offered to complete the survey, contributing to the lower survey response rate in 2021.

**Table H1.5.5 Fall 2021 Student Pulse Survey W10**

How would you rate the quality of the advising you receive?

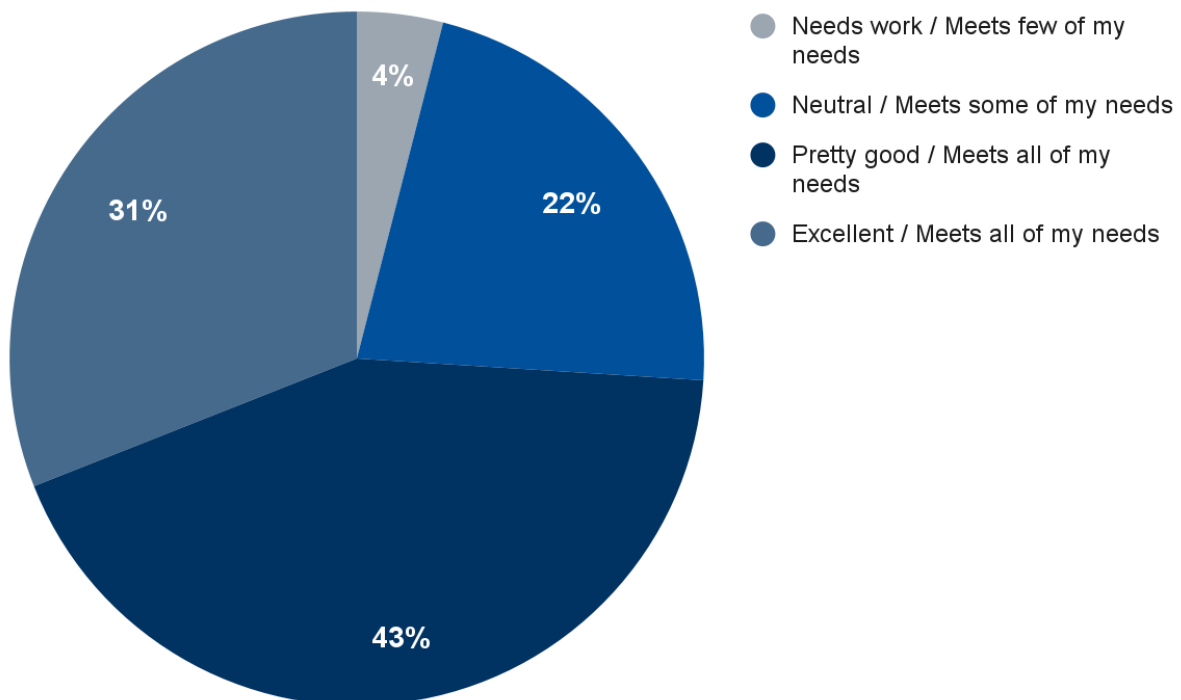
143 responses



**Table H1.5.6 Spring 2022 Student Pulse Survey W10**

How would you rate the quality of the advising you receive?

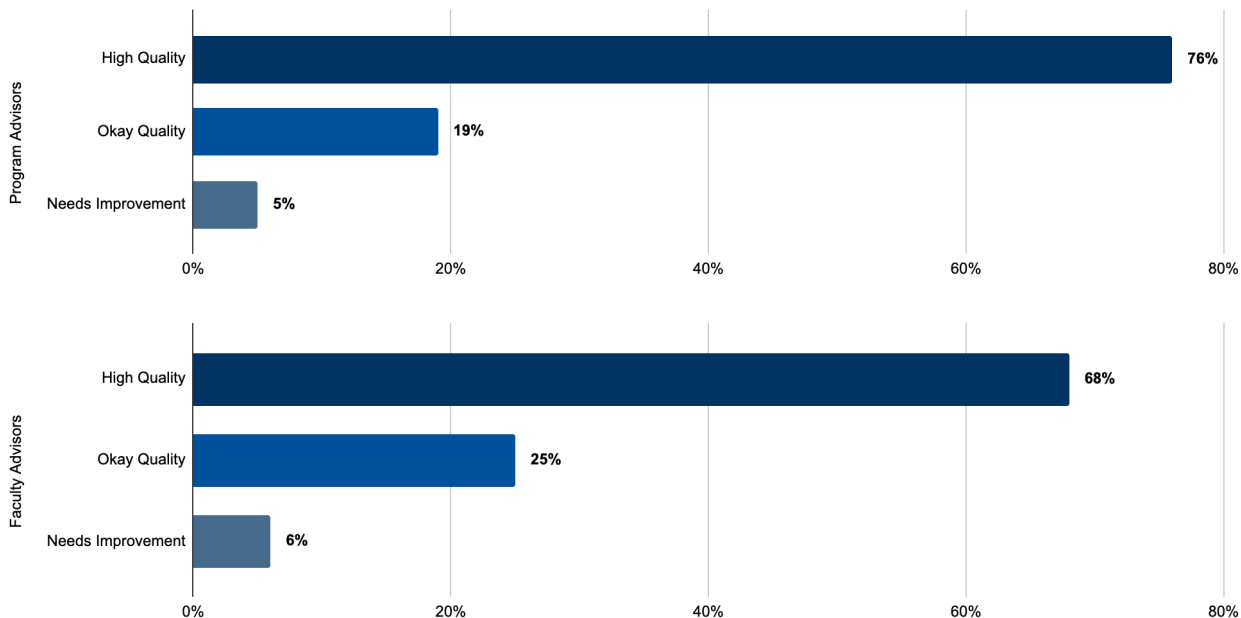
189 responses



**Table H1.5.7 Fall 2022 Student Pulse Survey W4**

How would you rate the quality of advising you receive from your program advisors and faculty advisors?  
155 responses

How would you rate the quality of the advising you receive from your Program Advisors and Faculty Advisors?



Additionally, according to our Week 10 pulse surveys conducted in Fall 2021 and Spring 2022, there has been an 11% increase in the percentage of respondents who rated the quality of advising as “excellent” or “pretty good” (63% in the fall, 74% in the spring). The percentage of responses in the “needs work” category has fallen from 7.7% to 4.2% during the same time period. According to the most recent Fall 2022 Week 4 pulse survey, the percentage of respondents who rated advising as “needs improvement” remains low (5% for program advisors and 6% for faculty advisors), and over 67% rated advising as “high quality.”

Survey data is available in ERF H1.5.

**(6) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

The School of Public Health offers diverse degree options so strong academic advising is critical to student success. Each student works with a faculty advisor who is aligned with their research interests and all students are tracked by the program manager for their specific program. In addition to individual advising from faculty and program managers, students also have resources available in the DREAM office, which offers additional support to URM students and first generation students. The RISE office also offers career counseling and professional development support to all graduate students.

Strengths:

- Group advising within programs which allow students to build relationships with their cohort and also ensures students are getting the same general information and also have the added opportunity to hear their colleagues' questions which can be helpful.
- Recording group advising sessions so that students can watch the sessions at their leisure and are able to refer back to it as needed.
- Individual advising for students in need. These meetings allow program managers the opportunity to assess how the student is doing in the program and identify and share necessary resources that may be helpful to the student.
- Program managers and all student facing staff participate monthly in the Student Advising Resource Group which is a meeting focused on sharing information and resources relevant to student advising. These could include sessions on international student needs, suicide prevention, mental health and wellness, or other topics. This meeting assures that student facing staff have regular professional development opportunities related to student advising and support.
- Some programs use their introductory seminar to provide group advising for new students.
- The programs utilize Slack as a modality for communication with students and program managers and for students to communicate with one another.

Weaknesses:

- If a student is struggling in classes such as biostatistics and epidemiology, it can be hard to know about until the midpoint in the semester. More frequent group advising check ins earlier in the semester could be helpful in catching students who are struggling earlier in the semester.

Plans for Improvement:

While we are proud of the support that we are able to provide to our students, we also are committed to continuous improvement in this area. As we return to full in-person engagement we hope to capitalize on the following areas to improve student advising and community building:

- Hosting monthly coffee chats with faculty and program staff so students are able to connect with faculty and staff in a less structured manner and build closer relationships with one another.
- Surveys and feedback are gathered at the end of each semester by the programs to allow the staff to adapt to the needs and concerns of students in real time.
- Sending out regular communications regarding deadlines and upcoming milestones so all students are receiving the same information.
- Continued professional development opportunities for student facing staff to improve their knowledge and advising skills.

---

## H2. Career Advising

---

The school or program provides accessible and supportive career advising services for students. All students, including those who may be currently employed, have access to qualified faculty and/or staff who are actively engaged, knowledgeable about the workforce and sensitive to their professional development needs; these faculty and/or staff provide appropriate career placement advice, including advice about enrollment in additional education or training programs, when applicable.

Career advising services may take a variety of forms, including but not limited to individualized consultations, resume workshops, mock interviews, career fairs, professional panels, networking events, employer presentations and online job databases.

The school or program provides such resources for both currently enrolled students and alumni. The school or program may accomplish this through a variety of formal or informal mechanisms including connecting graduates with professional associations, making faculty and other alumni available for networking and advice, etc.

- (1) Describe the school or program's career advising and services. If services differ by degree and/or concentration, a brief description should be provided for each. Include an explanation of efforts to tailor services to meet students' specific needs. Schools should present data only on public health degree offerings.

### Graduate Programs

The Career Services team is located within the RISE office. Career Services provides a full range of resources designed to support students and alumni at all points along the employment path, from their first days as a graduate student and throughout their careers. Career Services is dedicated to bringing together students, alumni, and community partners/employers to create a diverse public health workforce equipped to help solve the health challenges of the 21st century and beyond. As a team, Career Services employs a holistic, student-centered approach to meet diverse student and alumni needs through a variety of core offerings:

1. One-on-one career counseling;
2. Practicum support for MPH students;
3. Online platform for students and alumni;
4. Employer and community partnerships;
5. Trainings, workshops, and events; and
6. Accessible digital resources.

### **Core Offerings**

**One-on-one career counseling:** Students and alumni may schedule career counseling appointments to gain in-depth and personalized advice on their career development. Students and alumni often seek support through individual appointments to navigate career decision-making, strategize around their job search, review written materials (e.g., resume, cover letter), explore LinkedIn and the role of networking, conduct a mock interview, and evaluate/negotiate job offers. Additionally, students and alumni are invited to seek specialized support for applications to medical school, other advanced degree programs, and post-graduation fellowships (e.g., Presidential Management Fellowship).

Career counseling appointments are offered Monday through Friday at a range of times and through multiple mediums (in person, phone, Zoom) in order to meet diverse needs, including for students and alumni located outside the local area (e.g., in different time zones) as well as those balancing multiple commitments (e.g., working part- or full-time).

In 2020-2021, 576 appointments were scheduled with 2.0 FTE staff, following the training and onboarding of the second staff member. In 2021-2022, students and alumni scheduled 840 appointments with 2.0 FTE staff. In Academic Year 2022-2023, Career Services has increased capacity with the addition of a third staff member available to meet with students and alumni starting in November 2022. In the first three months of the academic year (July 1-October 1), students and alumni scheduled 226 appointments with 2.0 FTE staff.

**Practicum support for MPH students:** Career Services recognizes the significant role of the required applied practice experience in many students' professional development. As part of the RISE office, Career Services works in close partnership to support MPH students as they prepare for and carry out their required practicum. Specifically, Career Services provides one-on-one practicum advising, manages recruitment of practicum host organizations, coordinates practice-oriented events and workshops, and oversees the tracking of practicum-related information and submissions through a specialized online platform.

**Online platform for BPH students and alumni:** In January 2020, Career Services launched a new online platform for the exclusive use of public health students and alumni. The Public Health Leadership and Experience Exchange, or PHLEX ("flex"), is designed to meet the needs of Career Services and its constituents by offering a centralized platform to:

- **Manage appointments:** Students and alumni can easily navigate Career Services staff calendars to schedule an appointment and share any relevant materials for review.
- **Facilitate tailored recruitment:** Career Services staff actively oversee postings for a wide range of opportunities, including part- and full-time jobs, fellowships, internships, practicum, volunteer, and on-campus student positions (e.g., GSI, GSR). Students can search for and apply to opportunities of interest; employers/community partners can promote opportunities and optionally collect application materials directly through the platform.
- **Explore events:** The platform includes event listings for students to review, including the opportunity to register for workshops and employer info sessions hosted by Career Services. Employers/community partners can also submit events to promote.
- **Access MPH practicum information:** The platform serves as an educational and networking tool for students, as Career Services staff maintain and make available information such as previous practicum host organizations, preceptor contacts, and student feedback. Additionally, the platform serves as a central repository where MPH students and their preceptors submit required documentation, including their deliverables and evaluations.

**Employer and community partnerships:** Career Services oversees communication with employers and community partners with the goal of facilitating connections for students and alumni. Specifically, Career Services invites organizations to:

- Share opportunities (e.g., full-time jobs, internships), which Career Services staff then post/approve and promote among students and/or alumni,
- Participate in a recruitment event (e.g., info session, networking event, career fair) to increase awareness about their organization/opportunities, offer tailored advice, and/or connect directly with potential applicants,



- Partner with BPH courses seeking community partners for students to work on a real-world, semester-long project (e.g., program planning), and
- Schedule an individual consultation with Career Services to discuss their needs and identify opportunities for mutual benefit (e.g., to support development of an MPH practicum).

Career Services maintains a database of over 2,000 contacts and manages regular communication campaigns to employers/community partners to invite their engagement with BPH students and alumni. In support of the MPH practice requirement, Career Services places a particular emphasis on recruiting community partners to host MPH students for a practicum experience. In 2021-2022, Career Services hosted 1,355 postings on PHLEX, within which the majority were full-time jobs, 222 were practicum opportunities, and 143 were on-campus student positions.

For current students, each week during the academic year Career Services uses PHLEX to develop a list of opportunities that are new and also those with upcoming deadlines (e.g., jobs, fellowships, practicum). This content is disseminated to students through the weekly student digest in collaboration with Student Services.

**Trainings, workshops, and events:** Career Services offers regular trainings and workshops on a range of career-related skills, including resume writing, interviewing, and negotiating, among other topics. The Career Services team also includes expertise in other tools, such as the Myers-Briggs Type Inventory (MBTI) assessment and Designing Your Life framework, that help to inform offerings. Additionally, Career Services coordinates panels and info sessions with employers, public health professionals, and alumni oriented around diverse career paths. Examples include a session with the California Department of Public Health (CDPH) on how to apply for state jobs and a session with a consulting firm on how to prepare for case interviews.

Each year, Career Services hosts special events in partnership with other stakeholders, for example, co-hosting the annual Master's and PhD Career Fair with the central Career Center and the annual Career Café networking event with PHAA. Career Services is also responsive to regular requests for workshops for tailored populations, such as developing CVs for PhD students and navigating the imposter experience for Summer Seminar students.

**Accessible digital resources:** Career Services has been developing a suite of digital resources to meet student needs on demand. These include written resources, such as sample resumes and cover letters, as well as other guides related to job searching. In 2021, the RISE office created an internal Google site accessible to users within the berkeley.edu domain, in order to centrally house these resources and ensure broader, 24/7 access. In addition to web links and documents, the website serves as an archive of video recordings of past virtual events. Particularly since COVID-19, Career Services has had the opportunity to record events, including many workshops and alumni panels. Career Services staff have also scripted and recorded some short videos to provide an alternative learning format for common topics such as the practicum search and CVs vs. resumes.

### **Campus Partnerships**

In addition to school-specific resources, the Career Services team works collaboratively with colleagues across the university to support public health students and alumni, including career service professionals in other graduate/professional degree programs to co-host workshops/develop resources as well as the central campus Career Center, through which all UC Berkeley students have access to an additional online platform (Handshake), job/internship listings, career fairs, and other events such as employer info

sessions. In addition, students have access to 24/7 online resources such as Big Interview through the Career Center.

### Undergraduate Program

The undergraduate program promotes on-campus and off-campus career opportunities through a weekly Public Health newsletter that is sent out to prospective students, Public Health majors, and Global Public Health minors. Events that are advertised include but are not limited to: Public Health career panels (for example, PB HLTH 155D: Preparation for Public Health Practice and Leadership Seminar hosts career panels open for all undergraduate students), graduate school workshops, and networking events hosted by undergraduate peer advisors or student representatives. Academic advisors will refer students to the Berkeley Public Health Diversity, Respect, Equity, Action, Multiculturalism (DREAM) prospective graduate ambassadors and UC Berkeley Career Center for one-on-one services around graduate school and general career support.

For the most part, the career support services that our undergraduate public health students receive is from the campus Career Center. The UC Berkeley Career Center has a vision to cultivate a university-wide culture of career readiness, where every student engages in meaningful experiences, has a supportive professional community, and is empowered to achieve lifelong career success. Their mission is dedicated to advancing equity and access to career resources for every student and recent alumni of UC Berkeley. Some career services that are offered through the Career Center are as follows:

- Career advising appointments (online and in-person)
- Access to Handshake (job portal)
- Job search skills: resume and cover letter assistance, networking, interviewing
- Support in identifying internships, fellowships, and research opportunities
- Graduate school resources
- Career Fairs
- Workshops, events, and courses

Undergraduate Public Health majors receive access to Berkeley Public Health's online platform PHLEX. See "Online platform for BPH students and alumni" on Page 405 for more information.

## **(2) Explain how individuals providing career advising are selected and oriented to their roles and responsibilities.**

As of November 2022, the Career Services team includes three full-time staff members who provide career advising to BPH graduate students and alumni:

- **Director of Career Services (1.0 FTE):** The current Director of Career Services started in August 2018 and was recruited from UC Berkeley's central Career Center, where she had served a broad base of graduate and undergraduate students with an industry focus on public health and healthcare. She is master's-trained, active in professional associations, and has been recognized with a UC Berkeley Chancellor's Outstanding Staff Award.
- **Career & Practicum Specialists (2.0 FTE):** Two full-time advisors started in July 2020 and October 2022, respectively. These staff are dedicated to providing direct service to graduate students and alumni, including career counseling for all students and practicum advising for MPH students. Both have over a decade of experience in career development, including with graduate/professional degree students, and hold master's degrees with an emphasis on counseling. Both recruitments were conducted competitively using the same job standard; in addition to expectations of an advanced degree, the position requires previous experience in career development, including with graduate students, early and mid-career professionals,

and diverse populations. Each recruitment included multiple interviews, development and delivery of a sample student workshop on an assigned topic, and opportunity to engage with diverse stakeholders; to inform the decision making process, feedback was solicited from students, staff, and faculty who would be working in partnership with the roles.

While all Career Services staff have come to the school with previous relevant experience, new advisors complete an extensive onboarding and training process facilitated by the director of Career Services, including significant shadowing. Advisors also receive ongoing training and development, including on best practices and emerging trends around counseling techniques, public health careers, and technical systems. Additionally, Career Services staff all actively engage in professional associations and communities on a campus, regional, and national level (e.g., ASPPH Career Services Assembly).

**(3) Provide three examples from the last three years of career advising services provided to students and one example of career advising provided to an alumnus/a. For each category, indicate the number of individuals participating.**

A central goal of Career Services is to increase graduate students' confidence in navigating a practicum and/or job search, including developing application materials, interviewing, networking, and negotiating/evaluating offers. These are also areas that many students self-identify as opportunities for growth. For example, in a Fall 2022 survey of new first-year MPH students (120 respondents), the majority (58%) indicated they anticipate challenges around how to communicate their strengths through application materials and/or interviews. Additionally, the majority (54%) indicated they are not familiar with informational interviews, which meanwhile have been identified through other student surveys as a source of important networking for practicum and job opportunities.

With these goals in mind, three examples of services offered to students from the last three years include:

**Mock Interviews with Alumni/Professionals**

Career Services developed an annual mock interviewing program, which was offered for the first time in March 2021 and was most recently offered in February 2022. In its most recent version, Career Services identified a four-day period (Tuesday-Friday, February 22-25) with times ranging from 9 a.m.-6 p.m. in order to increase options for alignment with both student and mock interviewer availability. In consideration of participant availability as well as the ongoing COVID-19 pandemic, the mock interview program was offered virtually over Zoom.

Career Services recruited 15 professionals to serve as mock interviewers for 30-minute virtual sessions with graduate students. Based on availability, 47 mock interviews were scheduled, and students were invited to sign up for one mock interview, with mock interviewees representing diverse concentrations across the MPH, MA, PhD, and DrPH degree programs.

In advance of the event, Career Services provided training materials to orient both students and professionals to the mock interview format and ensure they were set up for success. Career Services facilitated the interviews over Zoom, welcoming students and professionals alike and moving them into breakout rooms for their 30-minute sessions, including time for both practice questions and verbal feedback. Mock interviewers were also invited to share written feedback through a form after each interview.

Of the 15 mock interviewers, 13 were alumni of public health graduate programs, offering a meaningful opportunity for alumni to give back to the school as well as for students to practice both networking and interviewing skills. Based on overwhelmingly positive feedback from both groups, the mock interview program will be offered again in Spring 2023.

### **Rapid Reviews: Resumes and LinkedIn Profiles**

Although Career Services is available year-round to meet with students, including to review resumes and other job search materials, staff have identified creative ways to increase visibility and lower potential barriers to these services. Specifically, since 2021-2022, Career Services has offered semesterly events to conduct “rapid reviews” of resumes and LinkedIn profiles. For example, in Spring 2022, Career Services identified two days (March 31 and April 1) and designated one date for in-person LinkedIn profile reviews and another for virtual reviews to meet the diverse needs of students, including those in our Online MPH program. Between the 2.0 FTE staff in Career Services, 32 students were served over Zoom, with every virtual “rapid review” appointment booked, and 50 students were served in person, including drop-ins and an additional incentive to get a professional headshot taken.

As engagement with Career Services varies across students and degrees, programs such as these have encouraged students to in some cases interact with Career Services for the first time. Additionally, they support Career Services in achieving their goal of creating more touch points across the broader graduate student population. These programs will continue on a semesterly basis, including an ongoing commitment to virtual offerings, which continue to be well received by students in both OOMPH and campus-based programs.

### **Career Café**

February 2022 marked the 22nd annual Career Café at the School of Public Health. Inspired by the format of “world café” this networking event invites current students to learn about diverse career paths within public health through small-group networking with alumni/professionals. The small group format is designed to provide an inclusive, supportive environment, including for students from historically underrepresented backgrounds and those who identify as newer to networking.

Career Services recruits public health professionals to attend the event and serve as table hosts, with a theme for each table (e.g., healthcare operations, community-engaged research). Instructions are provided to students and professionals alike to help orient them to the format, and a list of attending professionals is shared in advance with students in order to help them know what to expect and make the most of their time.

Traditionally held in February, since 2021 the Career Café has been facilitated virtually in consideration of participant availability as well as the ongoing COVID-19 pandemic. The Public Health Alumni Association (PHAA) has served as co-host, including to support with alumni recruitment; in 2022 over 70% of participating professionals were alumni (19/27). Meanwhile over 100 attendees were engaged through the virtual event, in which students were invited to rotate through breakout rooms at designated intervals in order to connect with the participating professionals. Year after year, students report value in hearing directly from professionals in the field, including advice for how to enter their particular organization or career path.

### **Alumni Example**

Career Services encourages alumni to stay engaged as they navigate transitions most immediately following graduation, as well as future needs around potential career pivots, promotions, and/or negotiations.

While alumni may attend many workshops and events, one-on-one career counseling is the most utilized offering among alumni. Career Services also engages alumni over LinkedIn and promotes other events geared towards alumni, such as those hosted by PHAA.

As an example of individualized counseling, a recent alumnus of the MPH program sought guidance from Career Services. Following graduation, the alumnus had accepted an offer from a nonprofit organization in their area of expertise. About 2.5 years into this position, the alumnus began exploring the idea of a new job based on growth in their skills as well as interest in a new sector. Over a series of one-on-one meetings, Career Services supported the alumnus in assessing their readiness for this change, connecting with their network, adapting their resume for a new audience and role, navigating multiple rounds of interviews, communicating with hiring managers on different timelines, and ultimately making a decision in the face of multiple offers, weighing various considerations such as job function, compensation, and work-life balance. The alumnus engaged Career Services early in their planning process and also communicated timely updates, which helped to facilitate support around time-sensitive needs such as negotiation. The alumnus has since started their new job and continues to remain engaged in the BPH alumni community.

- (4) Provide data reflecting the level of student satisfaction with career advising during each of the last three years. Include survey response rates, if applicable. Schools should present data only on public health degree offerings.**

**Table H2.4.1 Student Satisfaction with Career Advising**

Please rate your level of satisfaction with the following BPH resources:			
RISE Office (formerly Center for Public Health Practice and Leadership) including Career Services	2019	2021	2022
Very Dissatisfied	2%	4%	1%
Dissatisfied	4%	4%	4%
Neutral	25%	16%	18%
Satisfied	32%	35%	36%
Very Satisfied	37%	40%	41%
Number of responses (excluding "N/A"):	N = 169	N = 89	N = 140

Career advising is one of multiple resources offered through our RISE office, which graduate students have rated on the annual exit survey. Response rates have historically been high, as exit survey completion has been a requirement for in-person commencement tickets; this factor contributed to the lower number of total responses in 2021, when commencement was hosted virtually. In 2022, 77% of graduate respondents indicated "satisfied" or "very satisfied", up from 75% in 2021 and 69% in 2019. (No exit survey was administered in 2020.) The Exit Survey had a 66% response rate from graduate students in 2022 and 35% response rate in 2021. With no in-person graduation ceremony in 2021 due to the pandemic, the usual incentive of graduation tickets could not be offered to complete the survey, contributing to the lower survey response rate in 2021.

Additionally, qualitative feedback reflects both strengths and areas for improvement in the area of career services. Open-ended responses from 2022 exit survey respondents indicate the following themes:

**Strengths: Accessibility, Support and Coaching**

- “RISE is amazing.... Caitlin is so helpful! She was great in helping me revise my resume, get cover letters ready, and discuss negotiations in jobs. I think RISE should be advertised more especially before/during the internship search.”\*
- “Love career services!!”
- “The RISE office was always helpful and responsive.”
- “I LOVED the many offerings from career services, the webinars and career cafes and alumni networking.”
- “I especially want to recognize the RISE staff for their amazing support and hard work! I feel like they show up for us all the time and I can't thank them enough. Such great energy there, and understanding and encouragement.”
- “RISE was helpful in giving me advice as I navigated the interview and hire process with my next steps after graduation. Both Caitlin and Kandis were available with time-sensitive situations.
- I enjoyed interacting with the RISE staff, especially Kandis and Caitlin who were both very helpful and supportive.”
- “The staff at RISE are extremely supportive and kind and I appreciate so much of what they do.”
- “Second floor staff members have been a bedrock throughout my time here. In particular, the folks at RISE have been instrumental in my job search, and have always been patient when it comes to my anxieties and insecurities about next steps. [...] I really cannot imagine the school without the incredible folks in the second floor suite!”

**Area for Improvement: Additional Visibility Among Students**

- “RISE is amazing... Caitlin is so helpful! She was great in helping me revise my resume, get cover letters ready, and discuss negotiations in jobs. I think RISE should be advertised more especially before/during the internship search.”\*
- “I found the practicum helpful. I may have benefited from meeting with the RISE center to possibly get a slightly better placement.”

**Area for Improvement: Additional Connections to Alumni & Opportunities**

- “I think we can strengthen our RISE office. While we have made tremendous progress in adding more jobs to PHLEX and providing resume/cover letter assistance, we can aim to add a better mix of jobs and also tapping into our alumni network.”
- “Public health career fair would be appreciated.”

*\*Repeated due to reflecting both a strength and an area for improvement.*

Survey data is available in ERF H2.4.

**(5) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

Strengths: As part of the RISE office, Career Services has been recognized as a highly collaborative, student-centered unit. Since 2020, Career Services has been in a period of growth, including the establishment of new staff positions to meet the needs of students, alumni, and employers/community partners. Additional student-facing staff provide essential capacity to support practicum and career needs for the large increase in student enrollment, as well as establishment of new concentrations. Similarly, a new position is supporting outreach and communication to community partners, particularly around the need for additional practicum host organizations. Along these lines, Career Services has introduced a number of new initiatives, both technical and programmatic, and is eager to continue to bring an innovative, holistic approach to its mission.

On an individual level, Career Services is often contacted by students and alumni seeking personalized and timely advice, and is committed to continuing to provide a high level of direct service. Additionally, Career Services has committed to ongoing, intentional efforts to advance its ADEIBJ practice. Staff have completed training in anti-racism and equity-oriented advising and coaching, and have dedicated space to discuss cases and areas for growth, both in one-on-one counseling and on a systemic level (e.g., advocating for pay equity).

Weaknesses/plans for improvement: Career Services continuously aspires to more fully meet student needs, including diverse interests with regards to job function, industry, and geography. Opportunities exist to grow employer/community partnerships in areas of increasing student interest, such as consulting, health technology, and infectious disease control. While Career Services seeks to grow relationships and resources to support students pursuing a range of career paths, there will continue to be needs to maintain existing areas as well, such as government public health.

An additional area for improvement is evaluation. For example, low response rates from students have been a challenge on post-event evaluations. Meanwhile, among alumni and employers/community partners there is opportunity for more regular intervals for feedback via surveys about curricular effectiveness and workforce development needs. Input on in-demand skills, for example, is highly valued as the school prepares the large majority of its graduates to enter the field post-graduation.

### H3. Student Complaint Procedures

The school enforces a set of policies and procedures that govern formal student complaints/grievances. Such procedures are clearly articulated and communicated to students. Depending on the nature and level of each complaint, students are encouraged to voice their concerns to school officials or other appropriate personnel. Designated administrators are charged with reviewing and resolving formal complaints. All complaints are processed through appropriate channels.

- (1) Describe the procedures by which students may communicate complaints and/or grievances to school or program officials, addressing both informal complaint resolution and formal complaints or grievances. Explain how these procedures are publicized.

Student grievances are taken seriously by the School of Public Health. When a concern is expressed by a student, the individual (faculty, staff, or other campus official) hearing the concern encourages the student to bring the issue to the attention of the assistant dean for students, the chief of diversity, equity, inclusion and belonging, or other student services staff or faculty. It is the school's desire to resolve the issue with the least disruption to the student through informal discussions with the instructor or faculty advisor. If the student is not comfortable with this process, the assistant dean for students will refer the student to the campus ombudsperson for consultation and mediation. The ombudsperson will schedule an informal meeting with the student and others involved. If these informal procedures fail to settle the matter, the student may initiate a formal grievance. These procedures are outlined thoroughly in the Student Handbook in the "Grade grievance and appeals section". The handbook is available at the following webpage link: <https://publichealth.berkeley.edu/student-life/2022-2023-student-handbook/>

In the event of any grievance or dispute, students are encouraged to contact the Ombudsman Office for Students and Postdoctoral Appointees. UC Berkeley Division Regulation A207.A states that the grounds for grievance are: application of non-academic criteria, such as: considerations of race, politics, religion, sex, or other criteria not directly reflective of performance related to course requirements; sexual harassment; improper academic procedures that unfairly affect a student's grade.

- Informal Grievance Process: Students who wish to appeal a grade received in a public health course must first begin discussions with the instructor. Students may contact the department chair, the student ombudsperson, or another mutually acceptable third party who can attempt to mediate the dispute informally and impartially. If the matter is resolved informally between the instructor and student and requires a grade change, the department chair will refer the case to the Committee on Courses of Instruction (COCI), who will review the case and notify the Registrar's Office if they determine a grade change is required. If the matter cannot be resolved informally by the student and instructor or by a third party, then the student may begin the formal grievance process.
- Formal Grievance Process: If the matter cannot be resolved informally, and it has been less than one calendar year since the last day of the semester in which the course in question was taken, then the formal grievance process may begin. Neither the informal nor formal grievance process may begin if one calendar year has passed.
  - The student shall submit the case in writing to their department chair. The standing grievance committee chair, annually established following departmental officer appointing procedures, shall form an ad hoc grievance committee composed of three faculty members, including the committee chair, only two of whom may be from the same unit. The original instructor cannot be a member of the committee. The committee will also be



comprised of two students in good standing appointed by the Graduate Student Council. Student members must have been in residence for at least one year and, ideally, will have passed courses or an examination in the unit at least at the level of the disputed course or examination. A new ad hoc committee will be formed for each case presented. In cases where multiple grievances are presented (more than one student grieving grades for the same course, or one student grieving grades from multiple courses) a single ad hoc committee will be formed with the student's or students' written consent.

- After the student has submitted their appeal to their department chair, the committee will then obtain a written response from the instructor and will allow both parties to submit additional information orally or in writing. After the grievance committee reaches a decision, they will submit their recommendation, including minority view, to the department chair, student, and instructor. The department chair will then forward the committee's recommendation to the Committee on Courses of Instruction (COCI). If COCI finds in favor of the student, they may: change a failing grade to P or S, drop a course retroactively, retain the course but eliminate the grade from GPA, or adopt the letter grade, if applicable, recommended by 4 out of 5 members of the grievance committee.

**(2) Briefly summarize the steps for how a formal complaint or grievance filed through official university processes progresses. Include information on all levels of review/appeal.**

On occasion, non-grading decisions or actions may be disputed. The university has a variety of mechanisms to deal with complaints. The general rule, in the event of a dispute, is to begin with the parties closest to the situation. The principle is illustrated in the following policy adopted by the School of Public Health faculty for professional degree students. It pertains to administrative or academic decisions that impede or terminate progress toward a degree goal.

The student should first discuss the complaint with his/her faculty advisor.

1. If the situation is not resolved, the student and/or the graduate advisor should consult either:
  - a. the division head; or
  - b. the School of Public Health Standing Committee on Grievances.
2. If still unresolved, the next step is to consult the head graduate advisor and assistant dean for students.
3. Only if the above steps are followed without satisfactory resolution should the student bring the grievance or appeal to the dean of the Graduate Division.

**(3) List any formal complaints and/or student grievances submitted in the last three years. Briefly describe the general nature or content of each complaint and the current status or progress toward resolution.**

Students have the right to bypass the school and file a complaint directly with various departments on campus such as the Office for the Prevention of Harassment and Discrimination or the Office for Faculty Equity and Welfare. If this happens, the school may not find out about the complaint unless a formal investigation is conducted. Over the last three years we have had two student complaints. They are detailed below.

1. DrPH cohort complaint against a faculty member for differential treatment by race and for fostering an overall negative classroom environment.
  - Resolution: The faculty member was informed of the complaint and there was a meeting with the faculty member, the executive associate dean, the assistant dean for students, and our campuswide vice provost for faculty equity and welfare. In the meeting, we explained the nature of the complaint, provided the faculty member an opportunity to voice their perspective, and ultimately provided a list of resources to support the faculty member in behavior modification. Also, the faculty member provided an unsolicited written apology to the students. Other actions: the faculty member was removed from the teaching team for the cohort for the following academic year to give them a chance to work on their teaching and to avoid further harm to the students.
2. MPH student complained about mistreatment due to race (an accusation of cheating).
  - Resolution: We tried to resolve the situation informally but there was no agreement between the student and the two accused faculty members. Hence, we recommended that the student make a formal complaint to OPHD and allow the regular campuswide process to unfold.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

An observance related to weaknesses of these processes is if the student has filed a complaint and it was not resolved to their satisfaction. The school has recognized that the resolutions or lack of resolution related to a complaint is exclusive of reparative and restorative resources. In turn, this has left students with lingering feelings of distrust and insecurity. In acknowledgement of this gap in resources, the school has and will be taking several steps to address restoration of trust through three healing centered methods:

1. [Restorative Justice Center](#) has been a staple in the school's training resources guiding community building circles and leading additional restorative training for staff. The school has found that providing staff the skills needed to mitigate the harms students incur is critical in restoring trust. The Restorative Justice Center's mission is to "create opportunities for people to connect on deeper levels by sharing stories, engaging in deep listening, and developing respectful relationships, and community-based strategies for responding to conflict and harm."
2. RePAIR training will begin in a three-phased process within the school in October 2022. The training is available to all students, academics, select alumni, faculty, and staff. The purpose of RePAIR training is to offer a platform for cultivating places of authentic communication, supporting interconnectedness, addressing the impact of harms that have occurred, creating a culture of accountability for those harms, and ultimately providing safe environments for expression and collective resolution. By the end of the first phase of the training, participants will have increased confidence in their communication when encountering mistreatment or harm situations, and have increased satisfaction of how these situations are addressed. They will be fortified with tools to cultivate and sustain a Restorative environment that is thriving and productive.
3. [Trauma Transformed Systems Training and Implementation](#) is a systemwide accountability approach to organizations acknowledging harms within the organization and owning responsibility for creating a healing environment. This system is founded with a lens on public health in recognition that "trauma and chronic stress is a pervasive public health issue. Like people, organizations are susceptible to trauma and structural oppression in ways that contribute to fragmentation, reactivity and depersonalization. The effects of trauma are also pernicious and lead to systems that are trauma-inducing instead of healing and relationship-centered. Trauma Transformed recognizes that systems induce stress and our work focuses on creating healing environments, policies and practices that mitigate the impact of stress and trauma for our workforce and all of us impacted by systems.

---

#### H4. Student Recruitment and Admissions

---

**The school or program implements student recruitment and admissions policies and procedures designed to locate and select qualified individuals capable of taking advantage of the school or program's various learning activities, which will enable each of them to develop competence for a career in public health.**

**(1) Describe the school or program's recruitment activities. If these differ by degree (e.g., bachelor's vs. graduate degrees), a description should be provided for each.**

The School of Public Health actively recruits students to increase the ranks of personnel prepared for public health practice, research, and education. The school's recruitment policy is to make known its educational, research, leadership, and professional development opportunities to a broad base, with special efforts prioritizing underrepresented students. The intent of recruitment is not simply to increase the number of applications but to ensure that applicants understand the differences among the public health disciplines and the admission criteria so that applications are appropriate and demonstrate the strengths of the applicant. Recruiting activities vary by degree type and delivery.

**Undergraduate public health major recruitment:** Interested students will apply to UC Berkeley and then separately apply to the public health major in their 4th or 5th term. The School of Public Health undergraduate major recruits students through on-campus outreach and various on-campus partnerships.

Public Health works closely with the Letters & Science (L&S) College Biological Sciences advising neighborhood to share information about the major with L&S advisors, molecular and cellular biology (MCB), integrative biology (IB), and the Robinson Life Science, Business, and Entrepreneurship Program (LBSE). This group meets monthly and shares any information and events that would be helpful for incoming students exploring the biological sciences. This group will also host a joint information session highlighting the biological sciences majors and programs during Golden Bear Orientation for incoming freshmen and transfer students. To support Golden Bear Advising, the public health major hosts two information sessions during the first week of classes, a general information session and a transfer-oriented information session.

The co-managers/academic advisors are involved with the Transfer Alliance Project (TAP) and Transfer Student Success Group (TSSG) on campus in addition to partnering with Educational Opportunity Program (EOP) to hold satellite advising sessions for EOP students every other week.

Throughout the school year, the public health undergraduate program offers peer advising services through one-on-one appointments and drop-ins. Peer advisors are usually public health majors in their junior or senior year. The peer advisors host pre-application workshops about the application process for the public health major two to three times a semester and additional workshop sessions with partners (campus or student groups who request a specific pre-application workshop). In the past, these workshops have been done in conjunction with the Biology Scholars Program (BSP), EOP STEM, Cal Undergraduate Public Health Coalition (UPHC), L&S Biological Sciences neighborhood, and Black Students in Health Association (BHSA). UC Berkeley also hosts fairs and CalDay where the co-managers/academic advisors and peer advisors table. The graduate admissions recruitment team also conducts outreach at community colleges where they also discuss the requirements and process for transferring into the public health major.

Additionally, the public health undergraduate program also maintains a prospective student email listserv for students interested in the public health major or global public health minor. The listserv receives news about prospective student workshops and other public health opportunities available at UC Berkeley. The newsletter sent through the listserv promotes any opportunities targeted towards specific communities such as the Minorities in Health Conference and the new Leadership, Education, and Advancement in Undergraduate Pathways (LEAP) Training Program.

**Graduate program recruitment:** The Admissions and Recruitment team employs a variety of recruitment and application preparedness methods to inform students about our degree options, curriculum, research, public health career opportunities, community resources, tuition fees, financial aid, admissions process, and recommendations for submitting a complete application. Our approach spans across the school website, bi-weekly mailings through the prospective student listserv, in-person and online webinars, and participation in external recruitment fairs and events.

The school website contains the most up to date information about our degree options and concentrations, as well as our recruitment and admissions processes. Students can locate curriculum, graduation requirements, and faculty biographies for each concentration/degree. The admissions team provides detailed and regularly updated web pages on application instructions, admission requirements, dates and deadlines, frequently asked questions, and prospective student events. These comprehensive admission resources are frequently used by students throughout the application process and available to view at <https://publichealth.berkeley.edu/admissions/>.

Through our website, students can also [request more information](#) and sign-up for our prospective student listserv. Our messages include announcements and registration links for upcoming admission information sessions, fairs that the team is attending, and articles our faculty and students have been featured in. This is our main form of marketing admission events for prospective students.

In-person and online admission and recruitment events are presented throughout the year. Online webinars with general information about degree options, application process, and tuition fees and financial aid are available about once a month, and attendance ranges from 20 to 50 participants. The admissions team also conducts office hours, workshops, and concentration specific events during the fall season with attendance ranging from five to 15 attendants.

Yearly the admissions team hosts the following events: Master's Pre-Application Advising Session, Fall Conference, and Spring Visit Day.

1. **Master's Pre-Application Advising Session:** The purpose of this session is to help prospective students learn about how to prepare a strong application and assess if our school is the right fit. We provide opportunities for students to network directly with program managers from each concentration. This webinar is hosted once a year after our application has opened with the coordination of our students services team. About 125 to 135 prospective applicants attend.
2. **Fall Conference:** With the leadership of the Diversity, Respect, Equity, Action, and Multicultural (DREAM) Office, this annual conference is hosted by current students to introduce prospective students to the school. Centering around a new theme each year, panels are made up of current students and faculty. This event engages with about 100 prospective students and has been held both in-person and online.
3. **Spring Visit Day:** This yearly event for admitted students draws about 130 to 150 across online and in-person platforms. This event is used to help admitted students get to know our school better through faculty and alumni panels, open discussions with our career and DREAM office,

information sessions with the student funding manager, breakout sessions with each concentration, and tour of the building. Admitted students benefit from the connection with faculty, staff, and alumni. This has been a successful event in showing students our community, research interests, and graduate outcomes.

In addition to events held in-house, the admissions team, program managers, and faculty participate in a number of professional and graduate recruitment fairs for prospective students interested or already involved in public health. The school maintains a booth at the annual APHA Conference, staffed by the Student Services team. The admissions and student services team regularly participates in the virtual This is Public Health (TIPH) Graduate School Fair. At this event we connect with prospective students and introduce them to our degrees, answer application questions, and provide program specific information. The school is a part of Powerhouse, a group of admission counselors from prominent public health schools that hosts joint events for prospective students. The admissions team is invited to participate in graduate school fairs and class visits at other schools and organizations including the California Forum for Diversity in Graduate Education, UC Davis Pre-health Conference, UC Merced Graduate and Professional School Fair, NIH Graduate and Professional School Fair, Cal State University - East Bay, Graduate School Recruitment Fair at Morehouse College, and Boston College: Healthcare Graduate School Fair. At these external fairs our admissions team introduces prospective students to the UC Berkeley School of Public Health community, degree offerings, and graduate admissions process.

To achieve our goal of diversifying our student body, in addition to targeted outreach with minority-serving institutions, we have also partnered with community based organizations and professional programs such as Mentoring in Medicine and Science, California Department of Public Health-Cal State University Health Sciences Internship, Health Career Connection (HCC), and Americorps Health Fellows. Programs such as Americorps are ideal for outreach as students have at least a year of post-graduate work experience and are ready to start thinking about graduate school applications. Additionally, these new relationships have allowed us to broaden our reach with individuals from underrepresented backgrounds who already have demonstrated a commitment to pursuing public health, medical, or science careers.

**Online MPH recruitment:** In addition to the activities described above, the Online MPH program actively recruits students year-round to increase the number of qualified public health professionals to lead in public health practice, research, and education by pursuing their degree online. We use a variety of methods to increase awareness of our program offerings, admissions guidelines, and to reaffirm our commitment to our mission, vision, and values that are rooted in social justice. [The Online MPH website](#) provides the most comprehensive information that explains our program concentrations, admissions requirements, projected and current application deadlines, upcoming events (with option to RSVP), and student testimonials.

For initial recruitment events, we provide a compendium that includes general information about our program attached with the admissions team contact information. For initial online interactions, we provide an online folder with informational webinar recordings. We organize our own webinars focusing on program-related, application and writing workshops, select online graduate fairs in partnership with our residential admissions representatives, in-person out-of-state campuses, and annual recruitment fairs hosted by professional organizations, and select pre-health advisors. The intent of our outreach events are to raise awareness that we have an online option with specific requirements, and to network with other campus organizations.

We offer one-on-one and group advising to engage with prospective students. We send biweekly mailing information to students of new information, important dates, and deadlines. We solicit support from external campus partners, specifically, the Office for Graduate Diversity and Office of Graduate Admissions to coordinate and collaborate to ensure we are diversifying our student population and effectively applying the school's mission, vision, and values as we work with students.

Each application cycle, we schedule faculty/concentration-specific webinars for targeted recruitment. Our student ambassadors provide transparent context and address common questions, such as the student experience, that are better suited for them to respond to. Our instructional design team has also created a free online 101 course to encourage students to explore the field and sample what an online course would look like. Our recruitment and marketing team posts regularly on our social media channels to showcase student activities, public health related news, and school content. We use social media to respond to inquiries related to our application process. Our recruitment team regularly explores collaborative efforts with neighboring units within the school to strengthen our understanding of what we can provide to our students. We are jointly working with the residential admissions team to develop new recruitment materials that we can provide prospective students with.

**(2) Provide a brief summary of admissions policies and procedures. If these differ by degree (e.g., bachelor's vs. graduate degrees), a description should be provided for each. Schools should discuss only public health degrees. Detailed admissions policies, if relevant, may be provided in the electronic resource file and referenced here.**

## **Undergraduate Admissions Policies & Procedures**

**Undergraduate admissions requirements:** <https://publichealth.berkeley.edu/admissions/undergraduate/>

The public health undergraduate major is an impacted major and has limited seats for students. There are two application cycles, one at the end of fall semester and one at the end of the spring semester. Students must complete the specific courses listed as part of the admissions requirements (seven units of biological sciences, one year math, three social science courses) by the end of their fourth or fifth semester at UC Berkeley. There is a five-semester cap and students may not apply past their fifth semester at UC Berkeley. The major will accept transfer credit, AP credit, and IB credit to fulfill some of the requirements.

Students will apply to the major with the following materials:

- Statement of purpose (three to four questions, 500-600 words total)
- Personal history statement (400 words)
- Unofficial transcripts
- Prerequisite information and GPA calculation form
- Resume or CV

**Undergraduate admissions policies and procedures:** The number of students accepted into the major is dependent upon the number of seats available. The major is allocated 440 seats. If the total number of applicants (including those who passed the initial screening because of low GPA) would keep the total class size below 440, all students will be admitted without further review. If not, there will be a holistic review of ALL students. A holistic review will include looking at academics (grades and course load), leadership, work/volunteer experience, and essays.



The holistic review is conducted by multiple committee members. The committee evaluates applications based on the following three criteria:

- A review of the student's academic preparation (prerequisite coursework and GPA),
- A student's personal, professional and volunteer experiences (especially those regarding the decision to pursue public health), and
- Future leadership potential in public health.

Although academic performance is important, a student's ability to articulate their passion for public health is equally as important. In our application process, if a student has a prerequisite GPA of 2.75 or lower we ask that they explain why they have been experiencing academic difficulties in their personal history statement. These instructions are laid out on our website in the "Personal History Statement" section. These students will be pre-screened to ensure minimum requirements to succeed in our courses. Upon approval of the initial screening, these students will be considered along with the remaining applicants. The number of students accepted into the major is dependent upon the number of seats available.

## **Graduate Admissions Policies & Procedures**

**Graduate admissions requirements for all programs:** The UC Berkeley Graduate Division dictates the basic admissions requirements for all programs at UC Berkeley. The requirements are:

1. A bachelor's degree or recognized equivalent from an accredited institution,
2. A satisfactory scholastic average, usually a minimum B average (3.0) or equivalent (focused on work completed in the last two years of a bachelor's degree program and in all post-baccalaureate coursework). *Note:* If an applicant's undergraduate GPA does not meet the minimum, they may still submit an application. They are encouraged to provide evidence of other academic and professional accomplishments to demonstrate their capability to be successful in an academically rigorous environment. Alternative evidence may include courses they have successfully completed as work-related training,
3. Enough undergraduate training to do graduate work in their chosen area of study,
4. Evidence of English language proficiency, and
5. Submission of all required application materials.

Additional information about policies related to degree duplication, unit transfers, or concurrent enrollment is available on the [Graduate Division website](#).

Exceptions to the above requirements may be made via submission of an Exception Memo, which must be reviewed and approved by the dean of the Graduate Division. The exception memo must include a compelling reason for why an exception is being requested, and how the student may overcome challenges that result from not meeting the requirement(s).

In addition to the Graduate Division's requirements for admission, various programs may have program-specific requirements for an application to be reviewed. Examples of these include but are not limited to:

- Online MPH: Applicants need at least one college-level mathematics or statistics course completed with at least a grade of B+ or equivalent, reflected on an official transcript.
- DrPH: Applicants must have a minimum of two years or more of professional public health experience post-master's degree showing progressive responsibility and evidence of leadership potential.



- Health Policy & Management 11-month MPH: Applicants must be doctoral prepared clinicians (MD, DDS, PharmD, etc.) or somewhere on that educational pathway (student, resident, fellow, etc).
- More information about program specific requirements is available on our website.

The basic requirements above are considered along with the submitted application materials, which are assessed holistically by the admissions committees. The required application materials are as follows:

- SOPHAS Application plus fee or fee waiver, required only for on-campus MPH and MS programs, select concurrent degrees, and DrPH,
- UC Berkeley Graduate Application and fee or fee waiver, required for all programs. (*Note: A supplemental version and reduced fee is required for all SOPHAS applicants, whereas a complete application and fee is required for all Online MPH, PhD, Biostat MA, and select concurrent degrees*),
- CV or Resume,
- Statement of purpose, which clearly outlines and describes the applicant's academic and career objectives and why they are seeking this specific degree,
- Personal history statement, which is a narrative and space for applicants to articulate their background, experiences, challenges, adversity, and how they have shaped them,
- Three letters of recommendation from a combination of professional and academic recommenders,
- Transcripts from each institution attended. (*Note: SOPHAS applicants must submit a WES course-by-course evaluation if they attended a non-U.S. or non-English Canadian institution*),
- Official GRE test score, if required. (*Note: The majority of programs have made the GRE optional. The MPH and DrPH program has made the GRE optional only through 2023. The requirements will be reassessed next summer. The GRE requirement for MS, MA, and PhD programs is at the discretion of the academic divisions. The requirements and exemption policy are described [on our website](#), and*
- Writing sample, required only by select programs.

Applicants who obtained their bachelor's degree at an institution located in a country where English is not the primary official language must also submit evidence of English language proficiency via a TOEFL or IELTS scores, or meet one of the exemption criteria described on the graduate division website (<https://grad.berkeley.edu/admissions/steps-to-apply/requirements/#panel-roficiency1-3>).

The school's guidelines for conducting a holistic review of the above materials are available in [this document](#). No formula based on quantitative or qualitative criteria may guarantee admission. A variety of indicators in addition to GPA and GRE can be used to assess academic potential. While academic promise is a criterion for all students, each admitting unit has prerequisites or discipline specific criteria, such as professional experience, particular courses, or career goals.

#### **Graduate Admissions Policies & Procedures:**

Admissions policies and procedures are largely dictated by the UC Berkeley Graduate Division as well as School of Public Health faculty. Additionally, The number of offers of admission the school may make for the next academic year is designated by the Graduate Division for each degree type based on statistical records kept over previous admission cycles.

### *Residential Programs:*

*Note:* A comprehensive description of our admissions policies and procedures is available in [this document](#).

The school appoints a head graduate advisor (HGA), who has oversight over policies and practices related to our graduate programs that do not fall under the authority of a graduate group (i.e., MPH, DrPH). The assistant dean for students is authorized to sign off on any admissions forms that require a HGA signature for professional degree programs. Academic graduate groups (for MS, MA, and PhD programs) have their own designated faculty HGA. The Student Services Admissions & Recruitment unit has oversight of centralized admissions procedures and policies. The admissions team and individual graduate student affairs officers (GSAOs aka Program Managers) serve as liaisons with the Graduate Division.

- Each academic program has its own processes for determining the makeup of its admissions committees. Most programs have a combination of faculty and student reviewers. Some programs include alumni reviewers as well. DREAM office staff also support admissions committees by providing input and advocating for students from underrepresented backgrounds. Programs are encouraged to have an equity advisor and individuals from a diversity of backgrounds on each committee.
- Individual programs use their own rubrics based on the standards explicit to the degree. Rubrics are encouraged to be holistic and include measures related to diversity and other non-cognitive measures. A holistic review and admissions training is also offered by the admissions team and chief of DEIB each year for reviewers.
- The application deadline is December 1 for most programs. There is a secondary deadline of March 1 for programs who opt in. Application review takes place between December and April. We expect 85-90% of applicants to hear back on their admissions decision before our Spring Visit Day for admitted students in mid-March.
- The delay on some application decisions is a result of either our secondary deadline process or our redirect process. MPH applicants are invited to select a second choice program if they are not admitted to their first choice. Not all programs opt-in to the redirect process, and applicants are only redirected if their application is deemed competitive by the primary program.
- Some programs request additional slots based on the overall applicant pool or pool for redirects and second deadline. We also heavily monitor yield by Spring Visit Day or by the April 15 deadline and report out this information to programs so they can determine how many slots they would like to fill. Additional requests for slots must be reviewed and approved by the graduate division.
- Programs are responsible for *recommending* applicants for admission. These recommendations must be reviewed by the Graduate Division, which then generates and sends an official offer letter to the applicant upon approval.
- Applicants are not required to pay a deposit if they would like to accept their offer of admission.

### *Joint Medical Program:*

The UCB-UCSF Joint Medical Program (JMP) is both an academic master's program housed in the graduate division, Health and Medical Sciences, within the School of Public Health, and a professional degree which is accredited through the UCSF School of Medicine.

As a regional campus of UCSF admission standards, pedagogical policy, and curriculum decisions are made in partnership with the JMP and the UCSF School of Medicine for the medical program and the JMP and the UC Berkeley School of Public Health for the master's program.

The JMP appoints a head graduate advisor to oversee the master's degree, monitor the impact of admissions on students and faculty resources, and serve as liaison with the UC Berkeley Graduate Division.

JMP applicants apply to UCSF through American Medical College Application Service (AMCAS). Once applications are received, selected candidates are invited to complete a secondary application. During the secondary application process, JMP applicants can select the UC Berkeley–UCSF Joint Medical Program in addition to other programs offered by UCSF. Applicants are then asked to provide additional JMP-specific materials, including two short essay questions. Only applicants who have checked the JMP box on their UCSF secondary application will be considered for JMP admission. Due to the sequence of courses, applications are accepted for the fall semester only and follows the medical school admissions calendar through May.

#### *Online MPH:*

The Online MPH program is a professional self supporting degree program (SSDP) housed within the UC Berkeley School of Public Health. As such, admissions review standards for the Online MPH program are made by the director of academic advising and lead faculty of the interdisciplinary program. The standards are updated annually to ensure we are in compliance with Berkeley Graduate Division admission requirements.

The Online MPH program offers two admissions cycles per year, fall and spring. Students have the option of pursuing the following areas of study: interdisciplinary, health policy and management, epidemiology and biostatistics, public health nutrition, and health policy and management certificate.

Each year applications open in mid-September and students submit applications on a priority and final deadline status for the fall and one application deadline for the spring. Prospective applicants apply directly to [gradapp.berkeley.edu](http://gradapp.berkeley.edu) and are not required to submit a SOPHAS application.

The Online MPH admissions and recruitment team oversees the processes of receiving and preparing all completed applications, regardless of admissibility, for review by the faculty. Completed applications are sent to the faculty admissions committees in the appropriate area of concentration to review. The admissions committee is made up of faculty within UC Berkeley School of Public Health who have residential appointments. They provide the first and second application reviews and are offered \$50 per application reviewed as a small token of gratitude for their support of the online program. The academic lead faculty within each area of study provides the final faculty review. Admission recommendations are then forwarded to the Graduate Division, which then makes the final review and application inspection.

- (3) Provide quantitative data on the unit's student body from the last three years in the format of Template H4-1, with the unit's self-defined target level on each measure for reference. In addition to at least one from the list that follows, the school or program may add measures that are significant to its own mission and context. Schools should focus data and descriptions on students associated with the school's public health degree programs.

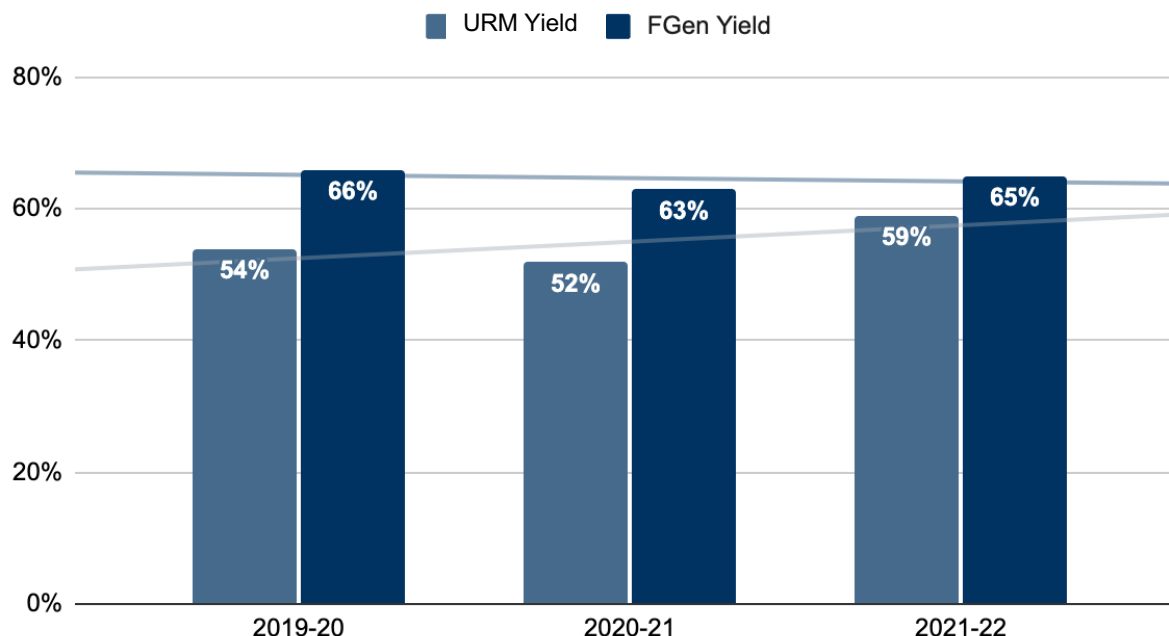
Table H4.3.1 Outcome Measures for Recruitment and Admissions

Outcome Measure	Target	2019-2020	2020-2021	2021-2022
Percentage of priority underrepresented students (as defined in Criterion G1) accepting offers of graduate admission	60%	54%	52%	59%
Percentage of priority first-gen <sup>1</sup> students accepting offers of graduate admission	60%	66%	63%	65%

<sup>1</sup> A student is deemed first-gen if they reported that neither parent graduated from college, regardless of whether or not they are a U.S. citizen, permanent resident, or foreign national.

**Table H4.3.2 URM and First-Gen Yield**

## URM Yield and FGen Yield



Based on the admit rate and yield data for URM students for the past three years, the URM yield rate has been on an upward trend and we have come really close to our 60% internal target in academic year 2021-22 (59%). The first-gen (FGen) yield percentage has remained stable over the past 3 years, above 60%. We are continuing to take action to maintain and increase the levels of URM and first-gen applicants and admits by pursuing strategies outlined in section 4 under “weaknesses and areas of improvement,” which includes increasing funding and basic needs support and redesigning communication channels.

**(4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.**

**Strengths:**

- Online Admissions and recruitment staff are aligned in their mission and vision of making admissions more equitable, transparent, and efficient. The strategic plan we've created was thoughtfully curated to support a variety of needs and the Berkeley Public Health community at large,
- Diversity, equity, inclusion, and belonging serve as the core of our recruiting strategy rather than a separate area of focus,
- We have maintained a high yield (50-60%) of underrepresented minority and first-generation students,
- We meet students where they are by providing high-touch and individualized approaches to recruitment and advising, and students have reported their satisfaction in working with our team, and
- We have a continuous improvement mindset and constantly pursue projects to make our processes more efficient and better serve students. Our school has been responsive to the changing landscape of graduate recruitment over the course of the pandemic (i.e. GRE optional for the majority of programs, virtual and hybrid events).

**Weaknesses and areas of improvement:**

- Our Graduate Division recently released a [policy](#) aimed at making our admissions processes more equitable, and we plan to work with our programs to ensure that we are in compliance,
- We are working to rebuild some of the partnerships we had with pipeline organizations that were lost during the pandemic
- Prospective students report challenges navigating our website and finding the appropriate staff to contact with questions. They also find the application confusing (as they vary by program) and expensive as we require submission in multiple portals; staff are working to increase transparency with applicants, streamline processes, and improve communications,
- Funding opportunities are very limited for international students, and funding is not equitable for doctoral programs (e.g. funding is guaranteed for the PhD but not the DrPH). In general our funding packages are not as competitive as those of our counterparts which impacts yield. Increasing funding and basic needs support will be a priority to maintain yield, reduce melt, and increase retention, and
- We are creating more communication channels to increase engagement and alignment between staff in separate units (such as communications and student services) and faculty leadership. The core admissions team aims to centralize resources and support, and collaborate across programs to break down silos, reduce inefficiencies, and better sustain staff and faculty during the admissions cycle.

---

## H5. Publication of Educational Offerings

---

Catalogs and bulletins used by the school to describe its educational offerings must be publicly available and must accurately describe its academic calendar, admissions policies, grading policies, academic integrity standards and degree completion requirements. Advertising, promotional materials, recruitment literature and other supporting material, in whatever medium it is presented, must contain accurate information.

**(1) Provide direct links to information and descriptions of all degree schools and concentrations in the unit of accreditation. The information must describe all of the following: academic calendar, admissions policies, grading policies, academic integrity standards and degree completion requirements.**

- Academic Calendar: <https://guide.berkeley.edu/academic-calendar/>
- Academic Policies: <https://guide.berkeley.edu/academic-policies/>
- Grading Policies:
  - <https://registrar.berkeley.edu/faculty-staff/grading/grading-policies-reports/>
  - <https://registrar.berkeley.edu/academic-records/grades/>
- Student Policies and Procedures: <https://sa.berkeley.edu/sa/student-policies-and-procedures>
- Student Rights and Responsibilities: <https://conduct.berkeley.edu/rights/>
- Academic Guide > Public Health: <https://guide.berkeley.edu/graduate/degree-programs/public-health/>
- Berkeley Public Health Student Handbook: <https://publichealth.berkeley.edu/student-life/2022-2023-student-handbook/>
- Berkeley Public Health Admissions Requirements:
  - On Campus Graduate Admissions: <https://publichealth.berkeley.edu/admissions/graduate/requirements/>
  - Online Program Admissions: [https://publichealth.berkeley.edu/academics/online/#bph\\_anchor\\_apply](https://publichealth.berkeley.edu/academics/online/#bph_anchor_apply)
  - Undergraduate Admissions: <https://publichealth.berkeley.edu/admissions/undergraduate/>





March 2023

Berkeley Public Health