

SCHOOL OF PUBLIC HEALTH
UNIVERSITY *of* WASHINGTON

Self-Study Report

Prepared for the Council on
Education for Public Health

September 2020

UNIVERSITY *of*
WASHINGTON

BE BOUNDLESS



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Introduction

1) Describe the institutional environment, which includes the following:

a. year institution was established and its type (eg, private, public, land-grant, etc.)

The University of Washington (UW) was established in 1861 and is a public institution.

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)

The School of Public Health (SPH) is one of 16 schools and colleges on the UW campus in Seattle (including the Graduate School). The SPH is one of six professional schools that comprise Health Sciences on the Seattle campus; the others are Dentistry, Medicine, Nursing, Pharmacy, and Social Work.

Number of degrees, as of August 2, 2020, at the institutional level (Seattle campus):

Bachelors (majors only)	237
Masters	239
Doctoral	110
Professional ¹	12+

- Undergraduate majors: <http://www.washington.edu/uaa/advising/degree-overview/majors/list-of-undergraduate-majors/>
- Masters and doctoral programs: <https://www.grad.washington.edu/admissions/find-a-program/>
- Professional degrees: UW Seattle campus does not provide a list of undergraduate and graduate professional degrees in one place. Many of the schools and colleges include some professional degrees. Bachelor level professional degrees include:
 - Bachelor's in Health Informatics and Health Information Management (BHIHIM)
 - Bachelor's of Science in Nursing (BSN)
- Master's professional degrees include:
 - Master of Architecture (M.Arch)
 - Master of Health Administration (M.H.A.)
 - Master of Health Informatics and Health Information Management (M.H.I.H.I.M.)
 - Master of Arts in Liberal Studies (M.L.A.)
 - Master of Public Administration (M.P.A.)
 - Master of Public Health (M.P.H.)
 - Master of Social Work (M.S.W.)
 - Master of Laws (L.L.M.)
- Doctoral professional degrees include:
 - Doctor of Musical Arts (D.M.A.)
 - Juris Doctorate (J.D.)
 - Medical Doctor (M.D.)
 - Doctor of Pharmacy (Pharm.D)

¹ Four of these are unique from the bachelor's, master's, and doctoral degree numbers.

c. number of university faculty, staff and students

Number of University faculty, as of October 31, 2019: <https://ap.washington.edu/wp-content/uploads/UWAP.Fact-Sheet-Final.pdf>

Professorial Faculty	4,251
Professor	1,841
Associate Professor	1,348
Assistant Professor	1,062
Instructional Faculty	473
Principal Lecturer	54
Senior Lecturer	230
Lecturer	189
Total Faculty	4,724

Number of university students, as of Spring Quarter 2020:

<https://studentdata.washington.edu/quick-stats/>

Undergraduate	28,959
Graduate	11,880
Professional and other degrees	2,778
Total Students	43,617

Number of university staff, as of fiscal year 2019:

<https://finance.uw.edu/uwar/annualreport2019.pdf>.

Full-time	27,070
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d. brief statement of distinguishing university facts and characteristics

The University of Washington (UW) is one of the oldest universities in Washington state and is the state's flagship institution. When it was founded in 1861, the UW was a Territorial University, offering Arts & Sciences classes in downtown Seattle. A few milestones, taken from the 150th anniversary timeline (<https://www.washington.edu/150/timeline/>), and others added, are listed below. School of Public Health milestones noted in **bold**:

- 1861—University of Washington founded
- 1894—School of Pharmacy founded
- 1895—Move to the new campus between Lake Union and Lake Washington
- 1909—Home Economics Department founded (**precursor to Nutritional Sciences**)
- 1910—Graduate School created
- 1917—UW Boeing partnership
- 1934—School of Social Work founded
- 1936—Boys in the Boat: UW Husky Crew wins Olympic Gold Medal
- 1945—School of Nursing established
- 1946—School of Dentistry founded
- 1946—School of Medicine established, including Department of Preventive Medicine (**precursor to SPH**)
- **1949—First Environmental Health graduate (Jack Hatlen)**
- **1970—School of Public Health and Community Medicine established, including Departments of Biostatistics, Environmental Health, Epidemiology, Health Services, and Pathobiology**
- 1970—First programs in Minority Affairs established
- 1971—School of Medicine trains physicians for the surrounding states that did not have a medical school. Partnering with Alaska, Montana, Idaho, and, eventually, Wyoming; now known as WWAMI (Washington, Wyoming, Alaska, Montana and Idaho)

- 1972—First collaborative project between UW and Public Health-Seattle & King County
- 1975—Microsoft founded by Bill Gates III and Paul Allen
- **1984—Interdisciplinary Graduate Program in Nutritional Sciences established in the Graduate School**
- 1989—UW Center for AIDS and STDs created
- 1990—UW Bothell Campus established
- 1997—UW Tacoma Campus established
- **1997—Institute for Public Health Genetics was founded as an Interdisciplinary Program in the Graduate School**
- **2007—UW launches Department of Global Health, jointly administered by Medicine & Public Health**
- **2009—School of Public Health and Community Medicine renamed School of Public Health**
- 2011—University of Washington celebrates 150 years
- **2012—Undergraduate Public Health major moves (from Arts & Sciences) to the School of Public Health**
- **2016—Population Health Initiative launched**
- **2020—School of Public Health celebrates 50 years**
- **2020—School of Public Health moves into The Hans Rosling Center for Population Health**

Today, the UW has three campuses in Seattle, Tacoma, and Bothell, as well as a world-class academic medical center. Each year, the UW confers more than 12,000 degrees (bachelor's, master's, doctoral, and professional). Several of the campus-wide leadership initiatives (<https://www.washington.edu/leadership/initiatives/>) celebrate characteristics that align perfectly with the values and goals of public health, including a Population Health Initiative, a Race and Equity Initiative, and a Community Engagement Initiative. The School of Public Health has been an active partner in the conception, development, and oversight of the University-wide [Population Health Initiative \(PHI\)](#), which was launched in 2016. The PHI has three pillars (human health, environmental resilience, and social and economic equity) and incubates and advances key population health-related programs, projects, and partnerships across the UW campus.

The School of Public Health and UW are united with students, faculty, and staff across campus in the commitment to “a world of good.”

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

The institutional-level accreditation for the UW is the [Northwest Commission on Colleges and Universities](#) (NWCCU), one of six regional accrediting organizations recognized by the U.S. Department of Education. This accreditation also qualifies the institution and its enrolled students for access to federal funds that support teaching, research, and student financial aid.

More information can be found on the UW Accreditation web page: <https://www.washington.edu/provost/strategic-planning/accreditation/>.

Many of the UW schools and colleges have additional accreditations. This list can be reviewed via the UW web page: <https://www.washington.edu/provost/strategic-planning/accreditation/specialized-accreditations/>.

For the UW School of Public Health, the non-CEPH accreditors include:

<i>Degree/Area</i>	<i>Accreditor</i>	<i>Last Accreditation</i>	<i>Next Accreditation</i>
Environmental Health Bachelor of Science	National Environmental Health Science and Protection Accreditation Council	2017	2023
Graduate Coordinated Program in Dietetics Master of Science Master of Public Health Doctorate	Accreditation Council for Education in Nutrition and Dietetics	2011	2020
Health Informatics and Health Information Management Bachelor of Science Certificate	Commission on Accreditation for Health Informatics and Information Management Education	2016	n/a ²
Health Administration Master of Health Administration	Commission on Accreditation of Healthcare Management Education	2013	2020
Occupational and Environmental Medicine Master of Public Health	Accreditation Council for Graduate Medical Education	2016	2020

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

The School of Public Health and Community Medicine was founded on July 1, 1970. Its founding was the culmination of visionary leadership in both the Department of Preventive Medicine and the School of Medicine in the preceding decade (1960 to 1970). In that decade, the department grew from four to 40 faculty. In 1968, four divisions were formally established: Biostatistics, Environmental Health, Epidemiology, and Health Administration/Health Care Studies.

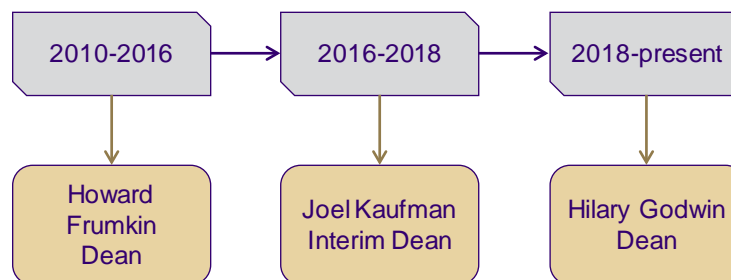
In part due to the growing reputation of the School of Medicine for research, research activities in the Department of Preventive Medicine between 1960 and 1970 grew in both quality and quantity. During this time, there was also a growing focus on training in epidemiology that included an emphasis on research competency. The Department became part of an effort nationwide to train epidemiologists in a new U.S. tradition.

When the School of Public Health and Community Medicine was established, it became the 17th accredited public health school in the United States and the first in the Northwest. As the School started, it was known for its collaborative and supportive environment, especially for junior faculty, thanks to the generosity and openness of its early leaders. Interdisciplinary collaboration was an early hallmark of the School. This culture of collaboration continues today.

In the 1980s, the School of Public Health and Community Medicine had five departments (Biostatistics, Environmental Health, Epidemiology, Health Services, Pathobiology). In 2003, the Department of Environmental Health was re-named the Department of Environmental and Occupational Health Sciences. In 2007, the Department of Pathobiology became a Graduate Program in Pathobiology, and a new department of Global Health was created. The Department of Global Health is jointly housed in the School of Public Health and the School of Medicine. In 2009, the UW Board of Regents approved the shortened name for the School to the School of Public Health.

² Once accreditation is earned, program status continues until cause to change status emerges.

Since the last CEPH Accreditation review, SPH has had two changes in Dean leadership, as shown in this timeline:



The configuration of responsibilities for academic affairs, education, research, public health practice, student affairs, advancement, and finance and administration has changed during this period as well. Since 2018, the number of assistant, associate, and vice deans have increased. The vice dean for strategy, faculty affairs, and new initiatives has responsibility for developing and implementing the strategic plan, and overseeing faculty affairs, including faculty health, scholarship, and advancement. The vice dean for education has responsibility for the graduate and undergraduate academic programs, including support of faculty in curriculum effectiveness.

The UW School of Public Health has a very strong reputation—it was ranked #5 in the world in 2019, in part due to its scientific impact, according to the [Global Ranking of Academic Subjects](#). The UW Department of Biostatistics has consistently ranked at or close to the top in [US News and World Report](#), and in 2018 was tied third in graduate statistics programs and first in graduate biostatistics programs (with Johns Hopkins and Harvard).

SPH offers both state-supported programs and fee-based degree programs. State-supported programs are supported by tuition, part of which comes from the State. Tuition rates are set by the Board of Regents, and are funded in part through the State allocation provided for students who are residents of the State of Washington. In contrast, each of the fee-based programs operates as if it is a stand-alone program, with a distinct and separate budget. Fee-based programs are not state-funded. As a result, the UW Provost, in consultation with the Faculty Senate (through its Faculty Senate Committee on Planning and Budgeting), determine the fees to cover the full cost of instruction. All tuition fees from these programs are collected by a central unit, the UW Continuum College (UWCC). Teaching costs, including faculty salaries, related to the fee-based programs, are carried in the corresponding UWCC budget, rather than by the School.

The Public Health Bachelor of Arts and Bachelor of Science degrees, previously available through the College of Arts and Sciences with only about 30 students per year, moved to the School of Public Health in March 2012. As it moved into the School, the degree was re-envisioned as a liberal arts degree, with a broad interdisciplinary base. It emphasized collaborative curriculum development, and evidence-based teaching methods, including student-centered learning. The enrollment in the 2011-12 academic year was 142, and has grown steadily to academic year 2019-20 enrollment of 550 students. In 2016, its then and current program director was the recipient of the [Riegelman Award for Excellence in Undergraduate Public Health Education](#). In 2018, the undergraduate major was renamed Public Health-Global Health, and was ranked the #1 Public Health Major in 2018 by [College Choice](#).

In 1997, the Institute for Public Health Genetics (IPHG) was founded. The IPHG was launched with funding from the [University Initiatives Fund](#) as “a multi-college, multi-level program (to) study scientific advances in genetics from many perspectives, including philosophy and social science, and (to) develop ethical, cultural, and legal frameworks to guide health-care and regulatory policies.” The original schools and colleges participating in IPHG were Arts and Sciences, Law,

Medicine, Nursing, Pharmacy, Public Affairs, and Public Health. In 2011, the Institute, including its Master of Science, Master of Public Health, and Doctor of Philosophy degree programs, moved from the Graduate School into the School of Public Health. Since that time, IPHG has developed new undergraduate courses to broaden its reach. IPHG's interdisciplinary programs are distinguished by providing trainees with a unique framework of ethical, legal, and social aspects of the emerging science of genomics, in conjunction with rigorous training in genomic analysis.

One of the most exciting recent developments in the UW School of Public Health has been the rapid advancement of interest in Nutritional Sciences among undergraduate students. The historical arc of Nutritional Sciences from its infancy in the Home Economics Department in the early 20th century to the School of Nutritional Sciences and Textiles to Department of Nutritional Sciences in the College of Arts and Sciences in 1978, to Interdisciplinary Program (IDP) in the Graduate School in 1984 (with program administration within the School of Public Health beginning in 1993), to its current status as an IDP at the School-level in the School of Public Health (since 2011) has been remarkable. This IDP is known as the Nutritional Sciences Program (NSP) and has been supported and sustained through the years by a small number of creative, talented, and dedicated faculty. These faculty have very strong research programs at the national and international levels, hold leadership positions in international organizations and national societies, and play leadership roles in FDA policy development. The faculty show leadership, commitment, and excellence in student-centered teaching. NSP offers the MPH RD (registered dietitian) credential, one of only eight such graduate-level public health dietetic programs in the U.S. The popularity of the program's minor in Nutrition for undergraduate students (focusing on the intersection of food studies, food systems, and population health) has led to the creation of a new undergraduate major in Food Systems, Nutrition, and Health that admitted its first cohort of 29 students in 2019. Demand for this major has soared, with 181 students declared in the major in Spring Quarter 2020.

The UW School of Public Health was first accredited by the Council on Education for Public Health (CEPH) in 1970 as the School of Public Health and Community Medicine.

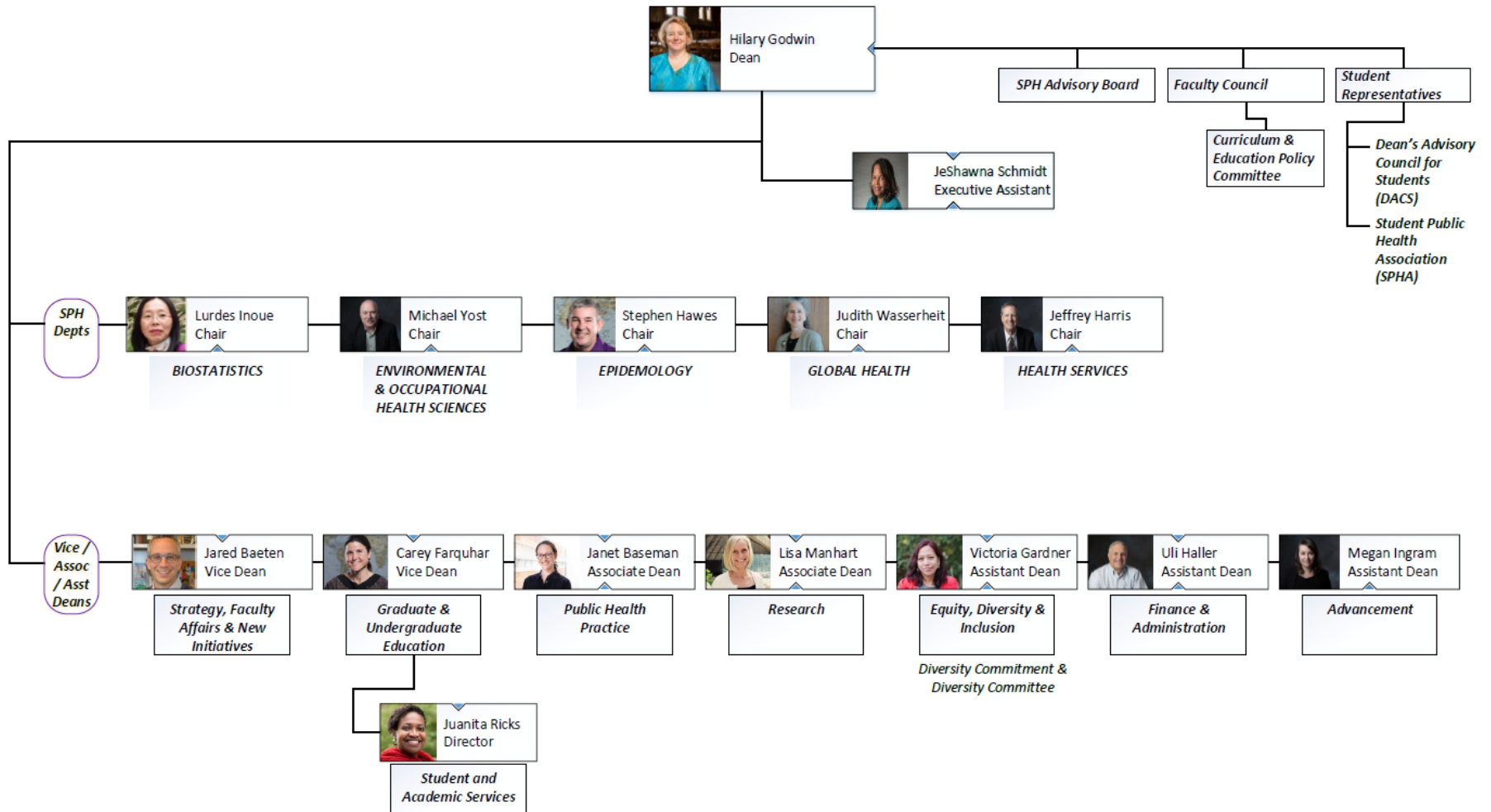
Its most recent re-accreditation review was 2013, renewing accreditation for a seven-year term. Seven questions to be answered in an interim report relating to then criteria: 2.3, 2.5, 2.6, 2.7, and 2.11 were noted. The interim report addressing these was submitted 2014, and compliance was affirmed by the CEPH Council in 2014.

With the new CEPH 2016 criteria for Schools and Programs in Public Health, and the timing of the rollout to all accredited schools, UW SPH submitted a Compliance Report, Option B in December 2017, and Compliance Report in the format of Option A in January 2019. In May 2019, an Interim report was submitted concerning the unique competencies for the MPH: Environmental & Occupational Health: One Health. In December 2019, UW SPH submitted an interim report (a partial revised Compliance Report A) concerned with revisions to Criterion D tables that received "CNV" on first review. In March 2020, SPH received a letter addressing this December report. In July 2020, SPH received commentary on the draft Self-Study Report. The remaining concerns have been addressed within this final Report.

2) Organizational charts that clearly depict the following related to the school:

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

Materials included in the Electronic Resource File:
Electronic Resource File\1.Introduction\Intro_2.

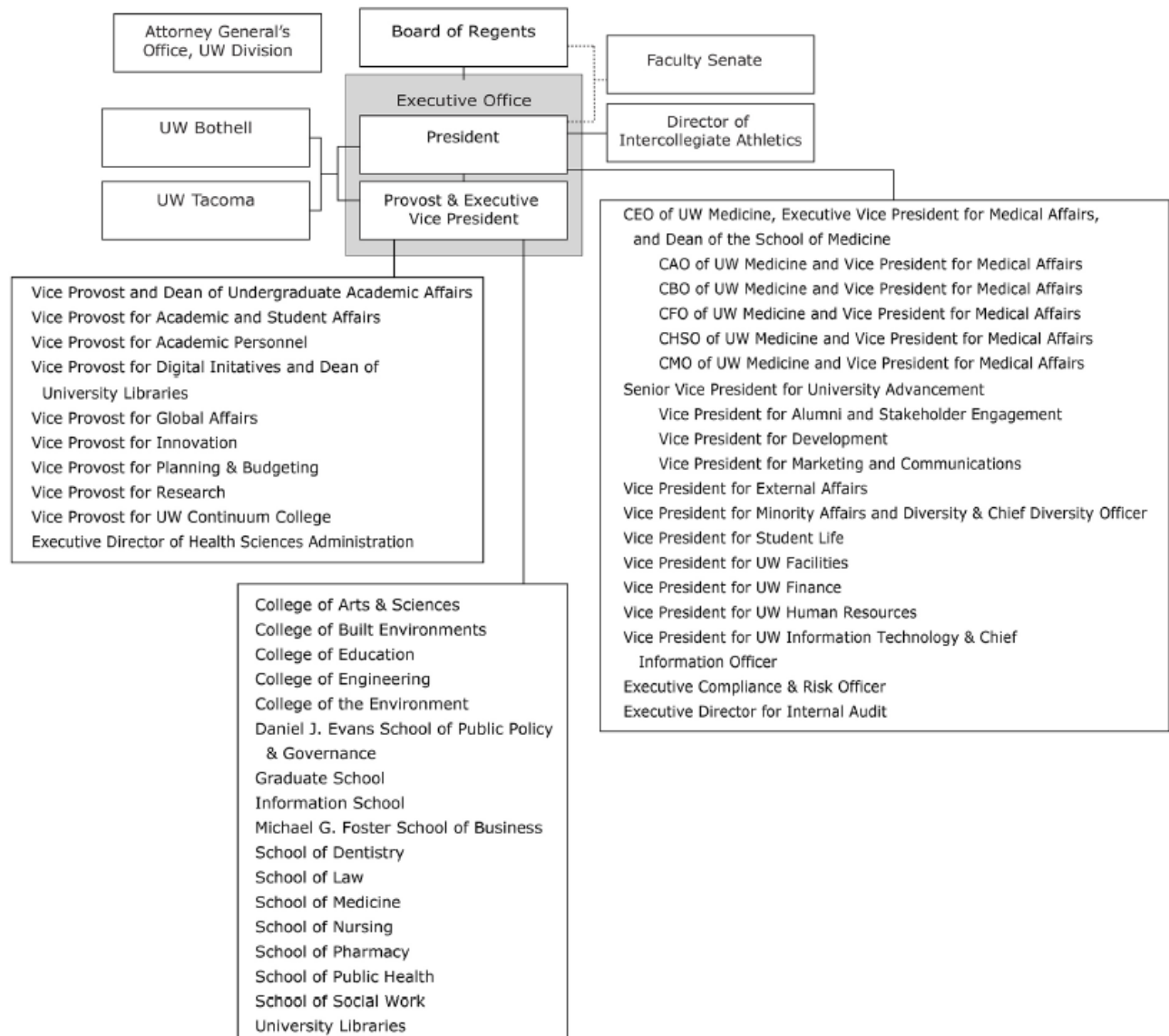


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- b. the relationship between school and other academic units within the institution. Organizational charts may include committee structure organization and reporting lines

<https://www.washington.edu/admin/rules/policies/APS/01.01.pdf>

Materials included in the Electronic Resource File:
Electronic Resource File\1.Introduction\Intro_2.



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

The University lines of authority are as noted in the above organizational chart. The Dean of this School of Public Health reports to the President of the University of Washington through the Provost. The President reports to the Board of Regents:
<http://www.washington.edu/admin/rules/policies/APS/01.02TOC.html>.

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

Not applicable to this School of Public Health.

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

Instructional Matrix - Degrees and Concentrations					
Bachelor's Degrees		Categorized as public health	Campus based	Executive	Distance based
Environmental Health	BS	X	BS		
Food Systems, Nutrition, and Health	BA		BA		
Health Informatics and Health Information Management	BS		BS		
Public Health-Global Health	BA, BS	X	BA, BS		

Master's Degrees	Academic	Professional	Categorized as public health	Campus based	Executive	Distance based
Biostatistics	MS		X	MS		
Biostatistics: Capstone	MS		X	MS		
Environmental & Occupational Health		MPH	X	MPH		
Environmental & Occupational Health: Applied Occupational Hygiene	MS		X	MS		
Environmental & Occupational Health: Applied Toxicology	MS		X	MS		
Environmental & Occupational Health: Exposure Sciences	MS		X	MS		
Environmental & Occupational Health: Occupational Hygiene	MS		X	MS		
Environmental & Occupational Health: Occupational Medicine Residency		MPH	X	MPH		
Environmental & Occupational Health: One Health		MPH	X	MPH		
Environmental Health	MS		X	MS		
Environmental Toxicology	MS		X	MS		
Epidemiology: Clinical and Translational Research	MS		X	MS		
Epidemiology: General	MS	MPH	X	MS MPH		
Epidemiology: Global Health		MPH	X	MPH		
Epidemiology: Maternal & Child Health		MPH	X	MPH		
Genetic Epidemiology	MS		X	MS		
Global Health: General		MPH	X	MPH		
Global Health: Health Metrics & Evaluation		MPH	X	MPH		
Health Administration		MHA		MHA	eMHA	
Health Informatics and Health Information Management		MHIHIM		MHIHIM		
Health Services: Clinical and Translational Research	MS		X	MS		
Health Services: Community-Oriented Public Health Practice		MPH	X	MPH		
Health Services: General	MS	MPH	X	MS MPH		
Health Services: Health Systems & Policy		MPH	X	MPH		
Health Services: Social & Behavioral Sciences		MPH	X	MPH		
Online Master of Public Health		MPH	X			OMPH
Nutritional Sciences	MS ¹		X	MS ¹		
Public Health Genetics		MPH	X	MPH		
Public Health Nutrition		MPH ¹	X	MPH ¹		

¹ Nutritional Sciences also provides the opportunity for students to take additional curriculum and training to obtain a Registered Dietitian credential post graduation.

Doctoral Degrees		Academic	Professional	Categorized as public health	Campus based	Executive	Distance based
Biostatistics		PhD		X	PhD		
Environmental & Occupational Hygiene		PhD		X	PhD		
Environmental Toxicology		PhD		X	PhD		
Epidemiology		PhD		X	PhD		
Global Health: Metrics & Implementation Science		PhD		X	PhD		
Global Health: Pathobiology		PhD		X	PhD		
Health Services		PhD		X	PhD		
Nutritional Sciences		PhD		X	PhD		
Public Health Genetics		PhD		X	PhD		
Statistical Genetics		PhD		X	PhD		
Joint Degrees (Dual, Combined, Concurrent, Accelerated Degrees)		Academic	Professional	Categorized as public health	Campus based	Executive	Distance based
2nd Degree Area	Public Health Concentration						
Anthropology	Epidemiology Global Health Health Services		PhD/MPH	X	MPH		
Built Environments	Environmental Health Health Services		MUP/MPH	X	MPH		
Business	Health Services		MBA/MHA		MHA		
Community Health Nursing	Global Health		MN/MPH	X	MPH		
Dentistry	Health Services		MSD/MPH	X	MPH		
International Studies	Epidemiology Global Health		MAIS/MPH	X	MPH		
Law	Global Health Public Health Genetics		JD/MPH	X	MPH		
Medicine	Environmental Health Epidemiology Global Health Health Services		MD/MPH MD/MHA MD/MS MD/PhD	MPH MS PhD	MPH MHA MS PhD		
Molecular and Cellular Biology	Epidemiology		PhD/MS	X	MS		
Public Administration	Environmental Health Epidemiology Global Health Health Services		MPA/MPH MPA/MS MPA/MHA	MPH MS	MPH MS MHA		
Social Work	Global Health Health Services		MSW/MPH	X	MPH		

- 4) Enrollment data for all of the school's degree schools, 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 D19) should separate those degrees and concentrations from the public health degrees for reporting student enrollments.

Enrollment as of Spring Quarter 2020	Enrollment
Master's	
<i>Master in Public Health Degrees</i>	354
Environmental & Occupational Health MPH	6
Environmental & Occupational Health: Occupational Medicine Residency MPH	7
Environmental & Occupational Health: One Health MPH	12
Epidemiology: General MPH	38
Epidemiology: Global Health MPH	9
Epidemiology: Maternal & Child Health MPH	13
Global Health: General MPH	51
Global Health: Health Metrics & Evaluation MPH	26
Health Services: Community-Oriented Public Health Practice MPH	43
Health Services: General MPH	30
Health Services: Health Systems & Policy MPH	17
Health Services: Social & Behavioral Sciences MPH	11
Online Master of Public Health	62
Public Health Genetics MPH	9
Public Health Nutrition MPH	20
<i>Academic Public Health Master's</i>	96
Biostatistics MS	15
Biostatistics: Capstone MS	10
Environmental & Occupational Health: Applied Occupational Hygiene MS	2
Environmental & Occupational Health: Applied Toxicology MS	0
Environmental & Occupational Health: Exposure Sciences MS	1
Environmental & Occupational Health: Occupational Hygiene MS	3
Environmental Health MS	2
Environmental Toxicology MS	4
Epidemiology: Clinical and Translational Research MS	5
Epidemiology: General MS	29
Genetic Epidemiology MS	6
Health Services: Clinical and Translational Research MS	0
Health Services: General MS	7
Nutritional Sciences MS	12
<i>All Remaining Master's Degrees</i>	136
Executive Health Administration Master's	49
Health Administration Master's	66
Health Informatics and Health Information Management Master's	21

Enrollment as of Spring Quarter 2020		Enrollment
Doctoral		
	<i>Academic Public Health Doctoral Degrees</i>	276
	Biostatistics	50
	Environmental & Occupational Hygiene	16
	Environmental Toxicology	9
	Epidemiology	92
	Global Health: Metrics & Implementation Science	41
	Global Health: Pathobiology	28
	Health Services	29
	Nutritional Sciences	1
	Public Health Genetics	8
	Statistical Genetics	2
Bachelor's		
	<i>Bachelor Degrees in Public Health</i>	560
	Environmental Health BS	64
	Public Health-Global Health BA, BS	496
	<i>All Remaining Bachelor Degrees</i>	273
	Food Systems, Nutrition, and Health BA	181
	Health Informatics and Health Information Management BS	92

Criterion A

A1. Organization and Administrative Processes

- 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 committees play a central role in the University of Washington's strong commitment to shared governance. The School's principal faculty committee is the standing Faculty Council. Regular members serve for a three-year term and can be re-elected for a second consecutive term. Membership of the Council terms run September through August. Members are elected by their department faculty, from each of the School's five departments. Departments seek nominations for membership and confirm willingness to serve. Confidential elections among the eligible voting faculty of the department are coordinated by the departments' Academic Human Resources staff. One additional member is elected annually to collectively represent the School's four interdisciplinary programs (Health Administration, Nutritional Sciences, Public Health-Global Health, and Public Health Genetics). Alternate faculty members participate in Faculty Council discussions when primary members are unavailable. There are no external stakeholders or alumni that sit on this Council.

SPH Faculty Council Membership, 2019-2020

<i>Name</i>	<i>Department or Program</i>
Gerard Cangelosi	Environmental and Occupational Health Sciences, faculty
Meghan Herman	Director of Human Resources, ex officio, staff
Margaret (Peggy) Hannon	Health Services, faculty
Susanne May	Biostatistics, faculty
James Pfeiffer (Chair)	Global Health, faculty
Nicholas Smith	Epidemiology, faculty
Bruce Weir	Public Health Genetics (interdisciplinary program), faculty

The Curriculum and Education Policy Committee (CEPC) is a standing subcommittee of the Faculty Council. CEPC members are not members of Faculty Council, but are separately elected as follows: each department maintains a standing curriculum committee, and its chair is elected by voting members of its faculty. Interdisciplinary Programs at the School-level also maintain curriculum committees for their degree programs, and their curriculum committee chair is nominated and voted on by the core faculty of the respective program. CEPC voting membership is comprised of these department and program curriculum committee chairs. Additional members include the MPH core director, two student representatives, the vice dean for education, the director for student and academic services, as well as the curriculum and accreditation specialist (who staffs the Committee). There are no external stakeholders or alumni that sit on this Committee.

CEPC Membership, 2019-2020

<i>Name</i>	<i>Department or Program (or Role)</i>
Michelle Arambula	Curriculum and Accreditation Specialist, ex officio, staff
Jim Condon	Health Services, faculty
Carey Farquhar	Vice Dean for Education, ex officio, faculty
Alison Fohner	Public Health Genetics (interdisciplinary program), faculty
Susan Graham	Global Health, faculty
Brandon Guthrie	Epidemiology, faculty
Cameron Haas	Graduate programs, student
Liz Kirk	Nutritional Sciences (interdisciplinary program), faculty
Sara Mackenzie	Public Health-Global Health (interdisciplinary program), faculty
Barbara McKnight	Biostatistics, faculty
Kurt O'Brien	Health Administration (interdisciplinary program), faculty
India Ornelas	MPH Common Core Director, ex officio, faculty
Juanita Ricks	Director for Student and Academic Services, ex officio, staff
Michael Rosenfeld (Chair)	Environmental and Occupational Health Sciences, faculty
vacant	Undergraduate programs, student

Another significant and standing committee identified by the Dean is the School of Public Health Equity, Diversity, and Inclusion Committee (SPHEDIC). Membership terms are two-years. The chair of each departmental EDI Committee is typically the representative to the SPHEDIC; the Committee is managed by the Office of the Dean. Additional positions are open to students, staff, and faculty from all departments and programs, who typically volunteer to be on this School-wide Committee because they are passionate about diversity issues. This committee is not meant to have a balanced representation from departments and programs. There are no external stakeholders or alumni that sit on this Committee.

SPHEDIC Membership, 2019-2020

<i>Name</i>	<i>Department or Program (or Role)</i>
Jen Balkus	Epidemiology, faculty
Barbara Baquero	Health Services, faculty
Ruanne Barnabas	Global Health, faculty
Holly Bergstrom	Health Services, staff
Erkan Bertram	Health Administration, student
Elaine Faustman	Environmental and Occupational Health Sciences, faculty
Victoria Gardner (Chair)	Assistant Dean for Equity, Diversity, and Inclusion, staff
Cameron Haas	Epidemiology, student
Susan Inman	Nutritional Sciences, staff
Anne Lund	Nutritional Sciences, faculty
Marina Martinez	Public Health-Global Health, student
Susan Mello	Global Health, staff
Elizar Mercado	Communications, staff
Juanita Ricks	Director for Student and Academic Services, staff
Keshet Ronen	Global Health, staff
Noah Simon	Biostatistics, faculty
Brenda Solis	Health Administration, student
Apoorva Somayazulu	Health Administration, student
rukie thomas	EDI Program Operations Specialist, staff
Pauline Trinh	Environmental and Occupational Health Sciences, student
Jen Velloza	Global Health, faculty

Dean Godwin maintains an Executive Council (SPHEC) of School leadership to support and advise School-wide and department-specific initiatives. This Council is made up of the Dean, departmental chairs, faculty/staff that sit in assistant/associate/vice dean positions, as well as the chairs of both the Faculty Council and the CEPC. There are no external stakeholders or alumni that sit on this Council. There will, however, be student leadership included once identified in the upcoming 2020-21 academic year.

SPHEC, as of August 2020

<i>Name</i>	<i>Department or Program (or Role)</i>
Jared Baeten	Faculty Affairs and New Initiatives, faculty
Janet Baseman	Public Health Practice, faculty
Carey Farquhar	Education, faculty
Victoria Gardner	Equity, Diversity, and Inclusion, staff
Hilary Godwin	Dean, faculty
Uli Haller	Finance and Administration, staff
Jeff Harris	Health Services, faculty
Steve Hawes	Epidemiology, faculty
Megan Ingram	Advancement, staff
Lurdes Inoue	Biostatistics, faculty
Liz Kirk	CEPC, faculty
Lisa Manhart	Research, faculty
Nicholas Smith	Faculty Council, faculty
Judy Wasserheit	Global Health, faculty
Mike Yost	Environmental and Occupational Health Sciences, faculty

The Office of the Dean also maintains a Research Council. The objective of the Council is to support and facilitate research in the SPH. The group is comprised of the director of research and the research administrator in each department, plus three members from the Office of the Dean: the SPH research administrator, the SPH director of finance, and the SPH associate dean for research. The Research Council identifies, develops, and implements School-wide strategies to support research and enhance the success of investigators in the School. The Council also serves as an advisory group to the Office of the Dean on research issues and disseminates information on funding opportunities and research compliance updates. Each faculty member is responsible for research activities in their own home department. As part of this responsibility, the Research Council faculty member meets with faculty members periodically and solicits input. This input is then conveyed to the Research Council as a whole when it meets; additional input is sought for special projects. For example, the Research Council invited several junior faculty members from each department to join in the discussion of research priorities for the School and provide input on faculty development activities to strengthen research success. There are no external stakeholders or alumni that sit on this Council.

Research Council Membership, 2019-2020

<i>Name</i>	<i>Department or Program (or Role)</i>
Leesa Brown	Research Administrator, staff
Donald Chi	Health Services, faculty
Pamela Collins	Global Health, faculty
Patrick Heagerty	Biostatistics, faculty
Liz Lancaster	Director, Finance and Research, staff
Patrick Lennon	Environmental and Occupational Health Sciences, staff
Lisa Manhart (Chair)	Associate Dean, faculty
Cynthia Marks	Biostatistics, staff
Barb McLaughlin	Epidemiology, staff
Dana Panteleeff	Global Health, staff
Christopher Simpson	Environmental and Occupational Health Sciences, faculty
Carmen Velasquez	Health Services, staff
Rachel Winer	Epidemiology, faculty

A new committee, launched in 2019, is the Master of Public Health (MPH) Steering Committee. This new group was formed with the charge to continue the work of the previous iterations of MPH re-envisioning (described later in this Report). This group is charged to ensure a successful launch of the new MPH Common Core courses during the 2020-21 academic year, and to follow these courses measurement and evaluation to ensure this new curriculum is meeting the needs of its students. They are also collaborating School-wide on issues for the Applied Practice Experience and the Integrated Learning Experience in the MPH. There are no external stakeholders or alumni that sit on this Committee. Members were determined by role within the MPH programs.

MPH Steering Committee, 2019-2020

<i>Name</i>	<i>Department or Program (or Role)</i>
Janet Baseman	Associate Dean, faculty
Julie Brunett	Global Health, staff
Nicole Dettmar	Health Services, staff
Carey Farquhar (Co-Chair)	Vice Dean, faculty
Mandy Fretts	Epidemiology, faculty
Victoria Gardner	Assistant Dean, staff
Steve Gloyd	Global Health, faculty
Uli Haller	Assistant Dean, staff
Kimberly Hay	Manager of Strategic Initiatives, staff
Jim Hughes	Biostatistics, faculty
Liz Kirk	Nutritional Sciences, faculty
Alex Kossik	Environmental and Occupational Health Sciences, student
Leif Layman	Epidemiology, student
Anne Lund	Nutritional Sciences, faculty
Scott Meschke	Environmental and Occupational Health Sciences, faculty
Diem Nguyen	Global Health, student
India Ornelas (Co-Chair)	MPH Core Director, faculty
John Paulson	Epidemiology, staff
Miruna Petrescu-Prahova	Health Services, faculty
Juanita Ricks	Director for Student and Academic Services, staff
Clarence Spigner	Health Services, faculty
Olivia van Brunt	MPH Core Program Manager, staff
Suzanne Yates	Health Services, staff

The last significant and standing committee, charged by the Dean, is the Undergraduate Programs Strategic Working Group. All undergraduate programs in the School are represented by both faculty and staff. Additionally, either faculty or staff (or both) from departments or interdisciplinary programs at the School-level that offer undergraduate coursework are included. The goal is to have balanced input from applicable programs and departments. Both staff and faculty are nominated to the committee to represent their respective departments and programs. There are no external stakeholders or alumni that sit on this Committee.

This committee is charged with:

- Developing an approach to managing growth of undergraduate student credit hours that balances the needs of all of the majors and minors in the School with the interests of the departments offering undergraduate courses
- Providing recommendations on how to handle other issues that cross over between undergraduate programs
- Formulating responses for SPH to new initiatives (e.g., the proposal concerning “direct to college/school” admissions)

Undergraduate Programs Strategic Working Group Membership, 2019-2020

<i>Name</i>	<i>Department or Program (or Role)</i>
Janet Baseman	Epidemiology, faculty
Lyndia Brumback	Biostatistics, faculty
Jim Condon	Health Informatics and Health Information Management, faculty
Shannon Delaney	Nutritional Sciences, staff
Todd Faubion	Global Health, staff
Carey Farquhar (Chair)	Vice Dean, faculty
Susan Inman	Nutritional Sciences, staff
Tania Busch Isaksen	Environmental and Occupational Health Sciences, faculty
Elizabeth Kirk	Nutritional Sciences, faculty
Joe Harper Kowalczyk	Public Health-Global Health, staff
Sara Mackenzie	Public Health-Global Health, faculty
John Paulson	Epidemiology, staff
Kathleen Peterson	Health Informatics and Health Information Management, faculty
Juanita Ricks	Director, Student and Academic Services; ex officio, staff
Jennifer Slyker	Global Health, faculty
Trina Sterry	Environmental and Occupational Health Sciences, staff
Suzanne Yates	Health Services, staff

Finally, SPH recently completed its design for the new 2020-2025 Strategic Plan. Several external stakeholders and alumni were included (details provided in Criterion B). The 2020 Strategic Planning Steering Committee included:

<i>Name</i>	<i>Department or Program (or Role)</i>
Emily Allen	Global Health, staff
Helena Archer	Epidemiology, student
Joseph Babigumira	Global Health, faculty
Jared Baeten (Chair)	Vice Dean, faculty, alumnus
Sarah Cave	Health Services, faculty, alumna
Alison Fohner	Epidemiology, faculty, alumna
Jo Gallagher	Health Services, staff
Victoria Gardner	Assistant Dean, staff, alumna
Uli Haller	Assistant Dean, staff
Kimberly Hay	Manager of Strategic Initiatives, staff
Patty Hayes	Public Health-Seattle & King County, external partner

<i>Name</i>	<i>Department or Program (or Role)</i>
Jeff Hodson	Director of Communications, staff
Megan Ingram	Assistant Dean, staff
Liz Kirk	Epidemiology, faculty, alumna
Linda Ko	Health Services, faculty
Sarah McCarthy	Accountable Care Organization, external partner, alumna
Paj Nandi	Washington State Department of Health, external partner
Jennifer Nelson	Kaiser Permanente, external partner, alumna
Esi Nkyekyer	Environmental Health and Occupational Sciences, faculty, alumna
India Ornelas	Health Services, faculty, alumna
Patricia Pavlinac	Global Health, faculty, alumna
James Pfeiffer	Global Health, faculty
Amanda Phipps	Epidemiology, faculty, alumna
Juanita Ricks	Director for Student and Academic Services, staff
Ali Rowhani-Rahbar	Epidemiology, faculty, alumnus
Nancy Simcox	Biostatistics, faculty
Charles Stevens	SPH Advisory Board, external partner
Tim Thornton	Biostatistics, faculty
Jacqueline Valdez Gonzalez	Public Health-Global Health, student
Jon Wakefield	Biostatistics, faculty
Mike Yost	Environmental and Occupational Health Sciences, chair

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

Departmental and interdisciplinary program curriculum committees conduct initial review and seek faculty approval of their respective core curriculum, completion requirements, and/or learning outcomes. Faculty membership on those committees is typically by invitation from the department chair (or program director). A mixture of senior and junior faculty is maintained. Student membership is solicited from the Student standing committees (Dean's Advisory Council or School of Public Health Student Association). Total membership is typically 8 to 12 persons.

The Curriculum and Education Policy Committee (CEPC), which includes the curriculum committee chairs of the department and interdisciplinary programs (at the School level), then reviews all new degree proposals and proposed curriculum, and all proposed curriculum changes submitted for final SPH approval.

Graduate-level program changes are then submitted to the UW Graduate School as well as the UW Curriculum Office for University approval and appropriate system-level updates (UW degree catalog, course catalog, time schedule, etc.).

Undergraduate-level program changes are submitted to the UW Curriculum Office for University approval and appropriate system-level updates (UW degree catalog, course catalog, time schedule, etc.). New degrees (e.g., the recently launched Food Systems, Nutrition, and Health undergraduate major) also need formal approval from the regional accreditor, the Northwest Commission on Colleges and Universities.

b. curriculum design

Curriculum design decision-making generally follows the same process as noted for degree requirements above. Prior to this process, an earlier step occurs for two of the School-wide degree programs in terms of curriculum design development. For both the Public Health-Global Health majors and the MPH Common Core, proposals for radically new curriculum design were formulated by special working groups of faculty and staff. These working groups included faculty in the Office of the Dean (e.g., assistant deans, associate deans, senior associate dean, and vice deans). Once formulated the process of review and approval described in (a.) above was followed in each case.

c. student assessment policies and processes

Departmental and interdisciplinary program student services teams conduct initial reviews for student assessment policies and processes. As appropriate, changes are reviewed by departmental/program curriculum committees, and then submitted to CEPC for final SPH approval. For undergraduate programs, decisions may also be reviewed by the Undergraduate Programs Strategic Working Group.

d. admissions policies and/or decisions

Departmental and interdisciplinary program faculty establish their admissions policy in a process that starts with their admissions committee and is brought to full faculty for ratification at the department or program level. There is no School-level review of policies.

Admissions decisions: Applications for admission to a degree program are reviewed by the relevant department or program admissions committee, using input from the broad faculty of the department or program. Final admissions decisions are made by the departmental and interdisciplinary program admissions committees.

e. faculty recruitment and promotion

All faculty recruitment and promotion follow the [UW Faculty Code](#). Faculty recruitment, retention, promotion, and tenure are shared responsibilities of the departments and the Faculty Council, with the Dean having final decision-making authority for SPH and the Provost for the University. The UW Board of Regents provides final approvals. Each faculty member has a primary appointment in a department, even if faculty are hired jointly across two departments and/or schools. [UW policy](#) requires tenured appointments to have a minimum of 50 percent FTE within any one unit up to a maximum of two units. Since 1992, new awards of tenure in SPH departments have been generally limited to 50 percent.

Hiring

After discussions between the Dean, vice dean for strategy, faculty affairs, and new initiatives, and department chairs, SPH develops an annual hiring plan, which is subject to approval by the Provost. The proposed hiring plan is discussed with the SPH Faculty Council and Dean's Advisory Council of Students (DACS) prior to submission to the Provost. Each department chair, in consultation with the department's human resources manager, initiates faculty recruitment per the approved plan, following School-level policies for equity, diversity, and inclusion in hiring, and through ad hoc departmental and program search committees. Individual hires are approved by a departmental faculty vote, the Dean, the Provost's Academic Human Resources (AHR) group, the Provost, and then the UW Board of Regents.

Promotion

Each fall, senior departmental faculty review all eligible faculty beneath the rank of professor/principal lecturer for possible promotion. If the departmental faculty recommend promotion, the recommendation and the packet of supporting materials is sent to the Dean, who refers the proposal to the Faculty Council. Faculty Council reviews the proposal and makes a recommendation to the Dean and vice dean for strategy, faculty affairs, and new initiatives, who forward the proposal to the Office of the Provost with the Dean's recommendation. If approval is granted by the Provost in discussion with the vice provost for academic personnel, it is forwarded to the UW Board of Regents as the final approval body.

f. research and service activities

Individual faculty members conceive of and secure funding for the vast majority of research and service activities. Faculty members often work collaboratively with other faculty members—both inside and outside the School—on developing and carrying out research or service activities. For example, an individual grant may include a Principal Investigator (PI), one or more Co-PI's, as well as additional key contributors.

Successful research scholarship for the faculty is essential for maintaining the vitality and reputation of all of the School's degree programs. Data in the fiscal year (FY) 2019 report from the [UW Office of Research](#) show number of awards and amount of awards by department in the following table.

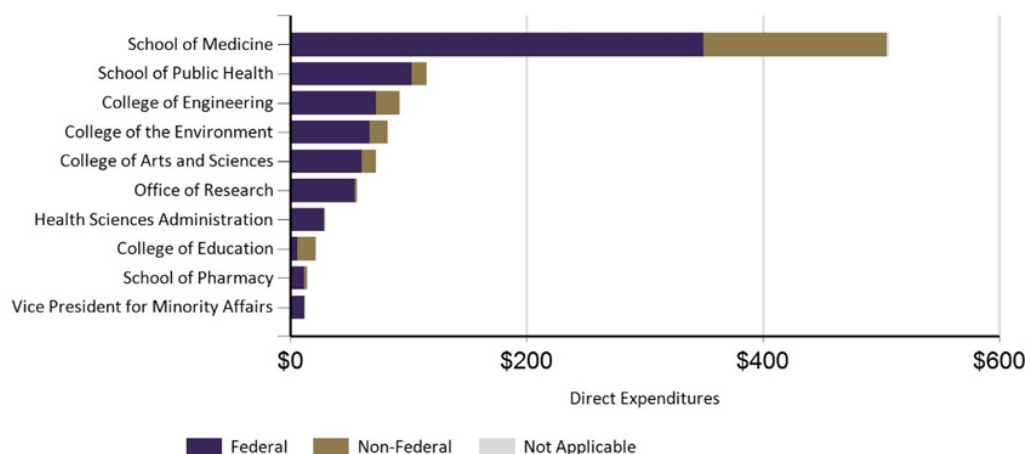
School of Public Health Grant Awards FY 2019

	Award Count	Total Amount of Awards
Biostatistics	130	\$22,873,999
Environmental and Occupational Health	72	\$34,463,827
Epidemiology	79	\$23,052,257
Global Health (SPH only)*	97	\$76,321,539
Health Services	57	\$11,464,184
Total	435	\$168,175,806

*By UW convention, this is 50 percent of the DGH awards (count and dollar figures).
The remaining 50 percent is allocated to the School of Medicine.

The School consistently ranks second for grant expenditures, among the 16 UW Schools and Colleges. Data from the [FY 2019 report](#) from the UW Office of Research show direct expenditures from grants with the relative position of SPH in the figure below.

TOP 10 SCHOOL/COLLEGE (MILLIONS)



Support for this success is provided at the national, University, School, and department/program levels. As funds are available, department chairs may provide partial matching funding or startup funding for prioritized specific projects or faculty members. Departments often prioritize emerging areas. For instance, the Department of Environmental and Occupational Health Sciences recently initiated a program of training and pilot funding in the emerging field of Environmental Health Microbiomes. In addition, the Dean may provide partial matching or startup funding in strategic areas. Peer faculty support and guidance from more senior faculty are provided in critiquing grant proposals prior to submission both within departments, and at the School-level via the associate dean for research.

Service activities in which faculty engage are a mixture of opportunities identified and nourished by the individuals themselves, as well as those suggested by the relevant department chair, or as promoted by the Office of the Dean. They include internal and external professional service, and service to the local or global community according to the talents and interests of the faculty.

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.

University of Washington

- UW Faculty Code and Governance: <https://www.washington.edu/admin/rules/policies/FCG/FCGTOC.html> (all SPH faculty must adhere to these policies and procedures)
- UW Administrative Policies: <http://www.washington.edu/admin/rules/policies/APS/APSTOC.html> (all SPH faculty and staff must adhere to these policies and procedures)
- UW Student Governance: <http://www.washington.edu/admin/rules/policies/SGP/SGPTOC.html> (all SPH students must adhere to these policies and procedures)

School of Public Health

- Academic Affairs Policies: <https://sph.washington.edu/students/academic-integrity-policy>
- Faculty Affairs Bylaws and Policies: <https://sph.washington.edu/faculty/academic-resources/sph-academic-affairs-handbook>
- Student Resources: <https://sph.washington.edu/students/resources>

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_A\A1.3.

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.

The University of Washington has a long and strong tradition of collegial, shared governance by faculty and administration. The campus Faculty Senate serves as the primary faculty governance committee, meeting regularly with the Provost and President. The School holds five Senate seats, proportionate to the School's faculty size. School Senators are elected bi-annually by vote of the SPH faculty. Additionally, there are 11 campus-wide Faculty Councils that are principal advisory bodies to the Senate on specific topics (e.g., Faculty Council on Teaching and Learning). Faculty may be invited to serve on one of these, or as an "at large" member of the influential Faculty Senate Committee on Planning and Budgeting (SCPB), which deals with University-wide financial matters.

One of the School's adjunct faculty (Wendy Barrington, who is also an Epidemiology alumna) currently serves on SCPB.

<https://www.washington.edu/admin/rules/policies/FCG/FCCRCH42.html#4239>

The Faculty Senate may propose policy in academic, personnel, or budgetary matters. To be put into effect, such proposals must receive the concurrence of the President and/or a majority of the voting faculty. University policies and procedures are contained in the online University Policy Directory:

<https://www.washington.edu/admin/rules/policies/>.

Current SPH Faculty Senators (serving two-year terms, September 16, 2019-September 15, 2021)

<i>Name</i>	<i>Department or Program</i>
Thomas Burbacher	Environmental and Occupational Health Sciences
Daniel Enquobahrie	Epidemiology
Gabrielle O'Malley	Global Health
Clarence Spigner	Health Services
Adam Szpiro	Biostatistics

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.

All faculty of the School, including full- and part-time faculty, are invited to regular faculty meetings. Full faculty are expected to attend each regular faculty meeting. Adjunct and part-time faculty attend less regularly, but are expected to attend at least once a year. Department faculty meetings occur either bi-monthly or monthly, as do core faculty meetings of the interdisciplinary degree programs. These faculty meetings serve to provide opportunities for faculty to interact, and also to learn about and discuss key points arising from departmental, School, or University subcommittees. Admissions, curriculum, and research subcommittees also meet regularly within the departments and programs. Departments and programs also organize regular seminars for students, faculty, and interested staff, providing additional opportunities for interaction, and for keeping abreast of current research.

The shared governance model is applied at the School level as well. The SPH Faculty Council meets monthly to review individual faculty tenure and promotion decisions, before forwarding its recommendations to the Dean. The Faculty Council also reviews any recommendations coming out of its Curriculum and Education Policy Committee (CEPC). In addition, the Faculty Council takes up a number of issues relating to the governance of the School, ranging from faculty salary policies to budget and fiscal health to faculty recruitment and retention. Monthly CEPC meetings are opportunities for faculty and student representatives to review curriculum and shape curricular changes. Annual meetings of the whole faculty of the School are organized and hosted by the Faculty Council. The meetings are organized around hot topics in teaching and governance of the School.

For the last few years, a focus on the Center for Teaching and Learning evidence-based teaching (EBT) program has been increasing. The model creates an environment for faculty to come together and learn together. As a cohort model, it supports faculty engaging with each other around curricular and course design, and active learning methods. School of Public Health faculty, from all departments and programs, are actively engaged in this program in increasing numbers. The School is one of seven core "departments" that form an internal Consortium for the Advancement of Undergraduate STEM Education (CAUSE), funded by the [National Science Foundation](#). Within the School of Public Health, the engagement of new faculty in EBT, and their participation in weekly EBT learning groups led by an SPH faculty member, has been quite successful. Between 2017 and 2020, the number of learning groups tripled.

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_A\A1.5.

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

Strengths

- Each of the School-level faculty committees (Faculty Council, CEPC, SPHEDIC, Research Council, and Undergraduate Programs Strategic Working Group) play significant roles in supporting the School in its new 2020 Strategic Plan (see Criterion B for details). These groups are key players as the mechanisms to implement the action-oriented goals across the School.
- The SPH departmental structure promotes strong, discipline-based research and teaching programs.
- SPH faculty participate in, initiate, encourage, and promote a wide range of interdisciplinary curricular, research, and service activities with partners from the wider UW community, within SPH, as well as the local and regional community.
- The strong record of extramural grant funding indirectly benefits the depth and breadth of the instructional program.
- SPH faculty actively participate in UW and SPH governance activities.
- Faculty across SPH departments and programs co-teach courses with one another, providing a breadth of experience and knowledge for students. Examples of these collaborations include:
 - The new MPH Common Core courses, to be launched in the 2020-21 academic year, encompassing the full cohort of students in the state-supported MPH programs:
 - ♦ PHI 511, Foundations of Public Health is taught by faculty from Epidemiology and Health Services.
 - ♦ PHI 512, Analytic Skills in Public Health I, taught by faculty in Biostatistics and Epidemiology.
 - ♦ PHI 513, Analytic Skills in Public Health II, taught by faculty in Global Health and Health Services.
 - ♦ PHI 514, Determinants of Health, includes faculty in the Environmental and Occupational Health Sciences and Health Services departments.
 - ♦ PHI 515, Implementing Public Health Interventions, taught by faculty in Global Health and Health Services.
 - ♦ PHI 516, Public Health Practice, taught by faculty from Environmental and Occupational Health Sciences and Epidemiology.
 - Additional examples can be found within the Public Health-Global Health Bachelor's major for all core courses, and in the Health Services department for various courses.

Weaknesses and Plans for improvement

- The primary focus in SPH of leaving decisions to be made at the department level results in diverse interpretation and implementation of policy across the School. New leadership in the Office of the Dean is currently working with departments to standardize practices wherever possible. This includes the development of standard teaching, research, mentoring, service expectations, and compensation for faculty which is as outlined in the School's new faculty compensation model (launched on July 1, 2020).
- Prior to development of the new faculty compensation model, faculty participation in UW and School committees was largely voluntary, making it challenging to recruit faculty to serve on committees. The new model provides base compensation for all faculty to cover a range of activities, including committee participation (service), and provides explicit guidelines outlining expectations for faculty participation on University, School, and departmental committees.

A2. Multi-Partner Schools

Section A2 not applicable to this School of Public Health.

A3. Student Engagement

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

The School operates with two standing student leadership groups: the Dean's Advisory Council of Students (DACS) and the School of Public Health Student Association (SPHA). DACS is a representative student body that provides student voice to the Office of the Dean on processes, policies, and decision making. Beginning Autumn Quarter 2020, DACS will be offered a leadership development course and will meet weekly with the Dean and/or other senior leaders to develop leadership, communication, and problem-solving skills, discuss ongoing issues, and provide the Dean with student-related updates and issues from across the School. DACS also provides formal input to the School's annual budget submission to the Provost, and serves as a reporting body for quarterly student concerns. Two members of the DACS typically volunteer to serve as DACS representatives for the SPHEC.

SPHA meets regularly and focuses on student activities. The SPHA President is also invited to attend monthly School of Public Health Executive Council meetings. SPHA members are elected from the student body, representing the School's programs and departments.

The UW Provost is advised by the Provost's Advisory Committee of Students (PACS). SPH students are occasionally elected to serve as members of PACS. SPH students are also sometimes invited to serve as members of the Executive Committee for the UW Population Health Initiative and as student advisory board members for the Health Sciences Library.

There are also many excellent student-led organizations within the School, as noted on this web page: <https://sph.washington.edu/students/organizations>.

Students, identified because of their own leadership roles in standing student leadership groups (DACS and SPHA), participate in SPH leadership meetings. Using networks of students engaged by the SPH Student and Academic Services office. The office reaches out to all students to invite participation in a variety of committees that advise on policy and other decision making. These include participation in curricular matters across the School each year as members of the Curriculum and Education Policy Committee (CEPC). Students also participate in diversity issues as members of the School of Public Health Equity, Diversity, and Inclusion Committee (SPHEDIC), which in 2019 drafted the School's new EDI Action Plan (see Criterion G for more information). Students also have membership on internal ad hoc committees, including the SPH Strategic Planning Committee, the MPH Steering Committee, MPH Re-Envisioning Steering Committee (AY2018-19), and the Re-Accreditation Self-Study Oversight Committee.

In addition, students actively participate in departmental committees, including some departmental faculty meetings (e.g., in Biostatistics, Environmental and Occupational Health Sciences, and Health Services) and most departmental curriculum and diversity committees. Students may also participate in program or department admissions committees and faculty search committees. These opportunities are volunteer opportunities for students; in some cases where more students express interest than there are opportunities, the committee chair will make a selection.

In a later section of this Report (Criterion F), there is additional information about student involvement in SPH activities (e.g., Community and Professional Services, F2).

The names of students who have been engaged in leadership activities on SPHA and/or who have served as student representatives on DACS, CEPC, and SPHEDIC in the last three academic years are provided in the tables below.

Academic Year 2019-2020

School of Public Health Student Association (SPHA)

Name	Program	Role
Sophie Anderson-Kundig	Public Health-Global Health	Undergraduate Student Development Officer
Awa Diallo	Public Health-Global Health	Vice President
Lindsey McClellan	Public Health-Global Health	Secretary
Jessica Nguyen	Public Health-Global Health	President
Nhu Nguyen	Public Health-Global Health	Treasurer
Monica Nobbay	Public Health-Global Health	Undergraduate Community Building Officer
Kasey Segiel	Public Health-Global Health	Graduate Community Building Officer

Dean's Advisory Council of Students (DACS)

Name	Program	Role
Sophia Cho	Health Informatics and Health Information Management (HIHIM)	Member
Claire Gwayi-Chore	Global Health	Member
Sakthi Krishnan	Master Health Administration	Member
Lauren Lee	Public Health-Global Health	Member
Patrick Lee	Health Administration	Member
Lindsey McClellan	Public Health-Global Health	Member
Shanise Owens	Health Services	Member
Meranda Pham	Public Health-Global Health	Member

Curriculum and Education Policy Committee (CEPC)

Name	Program	Role
Cameron Haas	Epidemiology	Member

School of Public Health Equity, Diversity, and Inclusion Committee (SPHEDIC)

Name	Program	Role
Erkan Bertram	Health Administration	Member
Cameron Haas	Epidemiology	Member
Marina Martinez	Public Health-Global Health	Member
Brenda Solis	Health Administration	Member
Apoorva Somayazulu	Health Administration	Member
Pauline Trinh	Environmental and Occupational Health Sciences	Member

Academic Year 2018-2019**School of Public Health Student Association (SPHA)**

Name	Program	Role
Rosheen Birdie	Community-Oriented Public Health Practice	Graduate Community Building Officer
LJ Cabutaje	Public Health-Global Health	Vice President
Roxanne Garcia	Public Health-Global Health	President
Emahlea Jackson	Nutritional Sciences	Graduate Student Development Officer
Cindy Luong	Public Health-Global Health	Undergraduate Student Development Officer
Ashley MacPherson	Public Health-Global Health	Undergraduate Community Building Officer
Keegan Na	HIHIM	Treasurer
Kenneth Wong	Public Health-Global Health	Secretary

Dean's Advisory Council of Students (DACS)

Name	Program	Role
Rosheen Birdie	Community-Oriented Public Health Practice	Member
LJ Cabutaje	Public Health-Global Health	Member
Bonny Chau	Health Services	Member
Roxanne Garcia	Public Health-Global Health	SPHA Representative
Cameron Haas	Epidemiology	Member
Martell Hesketh	Community-Oriented Public Health Practice	Member
Emahlea Jackson	Nutritional Sciences	Member
Keegan Na	HIHIM	Member
Divya Pahwa	Nutritional Sciences	Member
Manjot Singh	Public Health-Global Health	Member
Nandita Somayaji	Public Health-Global Health	Chair
Kenneth Wong	Public Health-Global Health	Member

Curriculum and Education Policy Committee (CEPC)

Name	Program	Role
Cameron Haas	Epidemiology	Member

Provost's Advisory Committee of Students (PACS)

Name	Program	Role
Cameron Haas	Epidemiology	Member
Nandita Somayaji	Public Health-Global Health	Member

Academic Year 2017-2018**School of Public Health Student Association (SPHA)**

Name	Program	Role
Christina Beran	Public Health-Global Health	Undergraduate Student Development Officer
Matthew Dacanay	Public Health-Global Health	President
Ali Everhardt	Environmental Health	Vice President
Loryn Moore	Public Health-Global Health	Secretary
Molly Reid	Epidemiology	Treasurer
Eileen Tran	Environmental Health	Undergraduate Community Building Officer

Dean's Advisory Council of Students (DACS)

Name	Program	Role
Yasmin Ahmed	Public Health-Global Health	Member
Neha Chohan	Public Health-Global Health	Member
Matthew Dacanay	Public Health-Global Health	SPHA Representative
Peder Digre	Global Health	Co-Chair
Prithvi Katari	Health Services	Member
Mikaeel Kazmi	Public Health-Global Health	Member
Yaxuan Li	Public Health-Global Health	Member
Tyler Nicholas	Environmental Health	Member
Elizabeth Oestreich	Public Health Genetics	Member
Sarah Rinehart	Public Health-Global Health	Member
Katherine Scott	Public Health-Global Health	Member
Manjot Singh	Public Health-Global Health	Member
Jocelyn Vargas	Global Health	Member
Lauren White	Epidemiology	Co-Chair

Curriculum and Education Policy Committee (CEPC)

Name	Program	Role
Teresa Mata	Undergraduate	Member
Maria Pyra	Global Health	Member
Amy Roll	MPH	Member

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

- The School encourages broad and active student participation, and a number of students do actively participate through a variety of committees.
- Student ideas and concerns are solicited and heard through these student committees, and other mechanisms.
- SPH students are engaged energetically and effectively across campus and in the community as evidenced by the regular inclusion of many SPH students in the Husky 100, with a particularly large number (10) in 2017 and again in 2020, for example. <https://sph.washington.edu/news-events/news/husky-100-taps-10-students-school-public-health-and>
<https://www.washington.edu/husky100/>

Weaknesses

- Given busy studying schedules, it is difficult for many students to make a meaningful time commitment to policy-making bodies.
- The formal structure of several of these committees can make it hard to hear input that does not fit neatly into an anticipated area covered by a standing committee. The School has implemented other means of gathering student input, such as the Student Concern Policy (reviewed in Criterion H), which covers the reporting and addressing of issues that arise in classrooms and other student-centric settings.

Plans for improvement

- A course to help enhance student leadership and communication skills has been created by the Office of the Dean, and is being launched during the 2020-21 academic year as an optional one-credit course. It is primarily intended each year for the students who have joined the Dean's Advisory Council of Students (DACS).

A4. Autonomy for Schools of Public Health

- 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 school of Public Health is one of 16 [Schools and Colleges](#) on the University of Washington (UW) campus in Seattle:

1. College of Arts & Sciences
2. College of Built Environments
3. Michael G. Foster School of Business
4. School of Dentistry
5. College of Education
6. College of Engineering
7. College of the Environment
8. The Graduate School³
9. School of Law
10. The Information School
11. School of Medicine
12. School of Nursing
13. School of Pharmacy
14. Daniel J. Evans School of Public Policy & Governance
- 15. School of Public Health**
16. School of Social Work

As do all deans of other schools and colleges within the University, the Dean of the School of Public Health reports to the President through the Provost on all budgetary and academic issues. The UW President reports to the Board of Regents, which has ultimate governing authority.

UW also includes two additional campuses in Bothell and Tacoma, WA, which are headed by Chancellors. Because the School of Public Health does not manage any of its degrees through these campuses, they are not referenced to any great extent within this Self-Study Report.

- 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 Board of Regents has ultimate authority for the governance of all three campuses of the University of Washington. Regents are appointed by the governor of the State of Washington and are, in turn, responsible for appointing the President of the University.

The President is the chief executive officer of the University and is responsible for the general welfare of the institution, including its programs in instruction, research, and public service. The President is directly responsible to the Board of Regents for the management of the University and is the University community's official representative to the Regents.

³ The Graduate School is home to 11 interdisciplinary programs, and also serves in an administrative role, facilitating all master and doctoral programs across the University, with the exceptions of School of Law and School of Medicine.

The Provost is the chief operating and academic officer of the University. This position reports directly to the President. The Office of the Provost is responsible for the development, implementation, and oversight of the University's academic programs, budget, research, and faculty personnel matters. The Provost provides leadership in educational and curriculum development formulation, and allocation of capital and operating budgets, management of academic and administrative personnel, allocation of space, and long-range University planning. In those areas for which the Provost has responsibility (including the School of Public Health), the deans report to the President through the Provost.

Throughout the University, each dean oversees her/his respective school's or college's educational and curriculum development, formulation and allocation of budgets, management of academic and administrative personnel, allocation of space, and long-range planning. The University operates with Activity Based Budgeting (ABB), which allocates resources to individual schools based on a revenue generated by that unit plus an institutional "supplement" that is derived from State funding to the institution. The schools then operate relatively autonomously within the parameters of University policies.

The Dean of the School of Public Health serves on the Board of Deans and Chancellors (BODC), which meets twice a month and provides advice to the Provost about a wide range of academic functions, including budgeting for academic units. The current Dean of the School of Public Health (Hilary Godwin) has been elected by her peers to serve as Vice Chair for BODC in the academic year 2020-21, and will serve as Chair of BODC for the 2021-22 and 2022-23 academic years. The Dean of the School of Public Health also serves on the Board of Health Science Deans, a council focused on matters of interest to the six health sciences schools within the Seattle campus. The other health sciences schools are Dentistry, Medicine, Nursing, Pharmacy, and Social Work. The health sciences schools operate independently, but collaborate on a number of financial, academic, and campus-related matters, including interprofessional education

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

Strengths

- The School has autonomy to move in appropriate directions educationally and in research, similar to other units. It receives collegial support from both the broader University and from the other health sciences schools.

Weaknesses and Plans for improvement

- The Activity Based Budgeting approach adopted by the University in 2012 leaves the School somewhat subject to uncertainties in the educational and research funding, especially as general State support recedes. SPH has actively sought to diversify its sources of funding since ABB was introduced, and efforts in this area continue. A new approach to faculty support was developed and rolled-out in 2020.

A5. Degree Offerings in Schools of Public Health

- 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.**

The professional public health master's degree concentrations this School of Public Health provides are as follows:

Master of Public Health

1. Environmental and Occupational Health
2. Environmental and Occupational Health: Occupational Medicine Residency
3. Environmental and Occupational Health: One Health
4. Epidemiology: General
5. Epidemiology: Global Health
6. Epidemiology: Maternal and Child Health
7. Global Health
8. Global Health: Health Metrics and Evaluation
9. Health Services: Community-Oriented Public Health Practice
10. Health Services: General
11. Health Services: Health Systems and Policy
12. Health Services: Social and Behavioral Sciences
13. Online Master of Public Health
14. Public Health Genetics
15. Public Health Nutrition

Master of Science

1. Biostatistics
2. Biostatistics: Capstone
3. Environmental & Occupational Health: Applied Occupational Hygiene
4. Environmental & Occupational Health: Applied Toxicology
5. Environmental & Occupational Health: Exposure Sciences
6. Environmental & Occupational Health: Occupational Hygiene
7. Environmental Health
8. Environmental Toxicology
9. Epidemiology: Clinical and Translational Research
10. Epidemiology: General
11. Genetic Epidemiology
12. Health Services: Clinical and Translational Research
13. Health Services: General
14. Nutritional Sciences

The professional public health **doctoral degree** concentrations this School of Public Health provides are as follows:

1. Biostatistics
2. Environmental and Occupational Hygiene
3. Environmental Toxicology
4. Epidemiology
5. Global Health: Metrics & Implementation Science
6. Global Health: Pathobiology
7. Health Services
8. Nutritional Sciences

9. Public Health Genetics
10. Statistical Genetics

Additional public health degrees provided by this School of Public Health include:

Undergraduate

- Bachelor of Science in Environmental Health
- Bachelor of Arts or Bachelor of Science Public Health-Global Health (with options in Nutrition, Global Health, and Health Education and Promotion)

Additional non-public health degrees provided by this School of Public Health include:

Undergraduate

- Bachelor of Arts in Food Systems, Nutrition, and Health
- Bachelor of Science in Health Informatics and Health Information Management

Master's

- Master's in Health Administration
- Master's in Health Informatics and Health Information Management

Certificate programs

- The School also offers a large number of certificate programs, both for-credit and not-for-credit. (The list of currently active certificates is included in the Electronic Resource File: Electronic Resource File\Criterion_A\A5.1.)

In summary, the School has five departments, offering Master of Public Health (MPH), Master of Science (MS), and Doctor of Philosophy (PhD) programs. All but one department offers at least one concentration within the MPH. One department offers its own bachelor's degree. Four interdisciplinary programs at the School-level also offer some combination of doctoral degrees, masters degrees (MS and MPH concentrations, as well as a MHA degree), and baccalaureate degrees.

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

All SPH degrees are included on this UW web page:

https://www.washington.edu/students/genecat/degree_programsTOC.html#SPH.

Criterion B

B1. Guiding Statements

- 1) **A one- to three-page document that, at a minimum, presents the school's vision, mission, goals and values.**

The Vision, Mission, and Values for the UW School of Public Health are as follows:

UW School of Public Health Vision:

Healthy people in sustainable communities—locally, nationally, and globally.

UW School of Public Health Mission:

The UW School of Public Health is dedicated to education to prepare outstanding, innovative, and diverse public health leaders and scientists; research to advance public health science and policies; and service to promote the health and well-being of communities locally, nationally, and globally.

UW School of Public Health Values:

- Integrity: Adhere to the highest standards of objectivity, professional integrity, and scientific rigor.
- Collaboration: Nurture creative, team-based, and interdisciplinary approaches to advancing scientific research and knowledge, and improving population health.
- Impact: Evaluate the effectiveness of our efforts, assessing if we have made a difference and learning from our experiences.
- Innovation: Create innovative approaches to educating and inspiring students and to answering important public health questions.
- Diversity: Embrace and build on diverse perspectives, beliefs, and cultures to promote public health.
- Equity: Promote equity and social justice in defining and addressing health and health care.
- Excellence: Recognize our school-wide strengths and the contributions of our faculty, staff, and students.
- Stewardship: Practice careful stewardship of the trust and resources invested in us.
- Courage: Bring courage, passion, and perseverance to advance public health principles in policy discourse.

Goals for the SPH are updated with each strategic planning cycle. The 2020-25 Strategic Plan was developed during the 2019-20 academic year in consultation with a broad range of stakeholders from the School. This initiative was led by a Strategic Planning Steering Committee that consisted of 30 members (as noted in Criterion A1) and was chaired by the vice dean for strategy, faculty affairs, and new initiatives, Jared Baeten. Members were selected to reflect the diverse experiences and viewpoints of the School and its partners. The Dean and departmental chairs compiled a list of potential candidates and then collectively narrowed the list to 30 individuals. The membership reflected the depth and breadth of the School: faculty (across ranks), staff, and students representing all departments and the interdisciplinary programs; individuals with joint appointments in other key collaborating schools; and external practice partners and advisors. The vision statement for the 2020-2025 Strategic Plan was: "UW School of Public Health tackles the greatest health challenges in our region and around the world. Our groundbreaking discoveries are fueled by rigorous science and equity-driven solutions. Our students are leaders who emerge prepared to work in partnership with communities to improve the health of all people."

A consulting company was hired to facilitate the process. The Committee and consultants gathered data, and set benchmarks, with established priorities based on input from internal and external

stakeholders. SPH held several town halls, convened focus groups, and conducted surveys across the SPH community to inform this new Plan, which was launched on July 1, 2020.

The 2020-2025 Strategic Plan has five high-level *goals* (referred to as Key Results Areas “KRAs”), with the overall goal to achieve Public Health Impact.

KRA 1: Collective Culture of Meaningful Change

“Our culture supports ongoing development and growth.”

- Outcome 1. UW SPH has a culture that supports ongoing development and growth.
- Outcome 2. UW SPH has a student-centered culture.
- Outcome 3. UW SPH has a culture of well-being and connection.

KRA 2: Education for Leadership and Transformation

“Our dynamic and supportive learning environment attracts the next generation of diverse leaders who go on to drive transformational change in communities throughout the world.”

- Outcome 1. UW SPH will offer consistent academic, professional, and personal support across all degree programs.
- Outcome 2. UW SPH will adopt best practices for student financial support; defined as students having the support they need to complete their degree program.
- Outcome 3. UW SPH will deliver high-quality evidenced-based education across all degree programs.

KRA 3: Methods to Research to Practice Continuum

“Continuous learning and rigorous science fuel our work. Collaborative research leads to cutting edge discoveries that we apply in ways that ensure healthier communities. Every outcome informs new waves of discovery.”

- Outcome 1. UW SPH will celebrate important work across the continuum from fundamental methodologies to the development and implementation of evidence-based strategies for understanding and changing complex health systems.
- Outcome 2. UW SPH will continue to conduct cutting-edge work in methods and research, with priorities implemented according to a roadmap created by the SPH Research Council.
- Outcome 3. At UW SPH, deep collaborations among faculty, staff, students, and key stakeholders result in successful models of academic practice.

KRA 4: Equity, Justice, and Anti-Racism

“We are an academic institution that promotes good health for all and breaks down structures of racism.”

- Outcome 1. The EDI Roadmap is implemented and our progress is shared with key stakeholders, increasing our visibility and reputation as a School that prioritizes equity, diversity, and inclusion.
- Outcome 2. With guidance from community members, principles of anti-racism are adapted in our public health work.
- Outcome 3. Structures and policies are in place at the School and improved to facilitate the recruitment and retention of underrepresented faculty and staff, especially those who identify as black and/or indigenous.

KRA 5: Reputation and Visibility

“We are recognized and highly regarded for our transformative impact throughout the region and the world.”

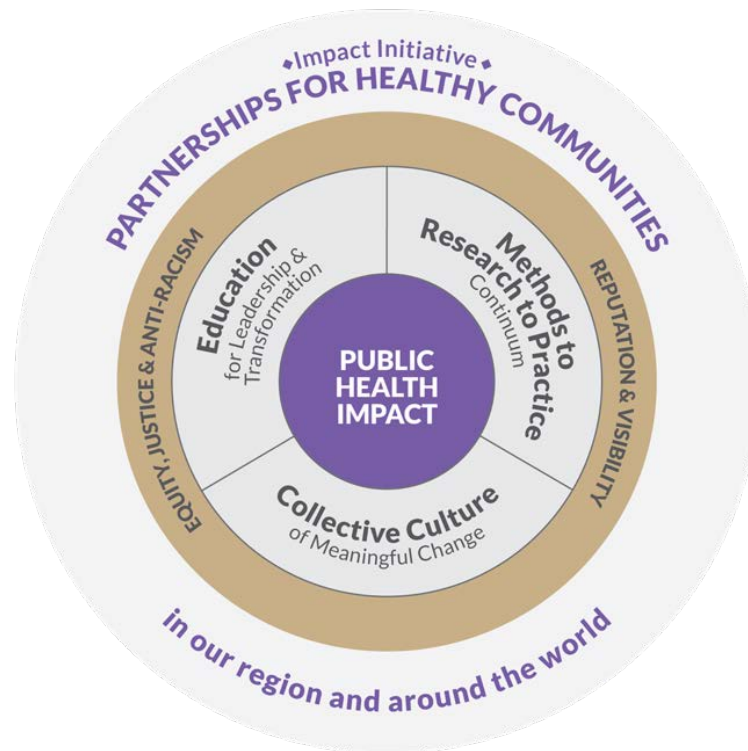
- Outcome 1. The reputation and visibility of UW SPH increases through use of a unified narrative across School communications which promotes the School’s strengths, expertise, and unique programs.
- Outcome 2. Coordination and alignment of UW SPH and department and program marketing and communication activities are maximized, delivering more effective messages of real-world impact to all our audiences.
- Outcome 3. Public audiences and alumni are meaningfully engaged in the UW SPH community and giving back financially.

Overall Impact Goal: Public Health Impact

“Our work through this Strategic Plan ties together in an overarching Impact Initiative focused on partnerships—across our School and UW, and with communities locally, regionally, and globally. We will use the first year of the Strategic Plan to refine Impact Initiative outcomes.”

- The 2025 outcomes will be defined by the end of 2020.

The diagram below illustrates how these goals work together and provide synergy to the Plan as well as the overall mission and vision.



The former SPH *Strategic Plan 2012 to 2020*, developed in consultation with a wide range of internal and external stakeholders, served as a guide for prioritizing investments and activities for the last eight years.

Goals: The *Strategic Plan 2012 to 2020* contained two categories of goals:

- Strengthening Our Core:
 1. Strengthen Our Teaching. *Review and Revitalize the MPH Curriculum; Invest in Our Ability to Teach, Mentor, and Advise*
 2. Strengthen Our Research.
 3. Strengthen Our Collaborations with Community Partners.
 4. Globalize the School.
 5. Improve Our Diversity.
 6. Enhance Our School Community.
 7. Promote the School. *“Tell Our Story” Effectively; Strengthen our Resources through Advancement*

- Meeting Emerging Challenges:
 - A. Global Environmental Change and Human Health.
 - B. Genomics and Public Health.
 - C. Obesity, Food, Physical Activity, and Health.
 - D. Health Policy and Health Systems.
 - E. Public Health Implementation Science.
 - F. Social Determinants of Health.

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

The new Strategic Plan soft launch was recorded as a webinar at the end of June 2020 and can be viewed via this link: <https://www.youtube.com/watch?v=l-zVlzZSS3M&feature=youtu.be>.

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_B\B1.2.

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

Strengths

- The identification of “emerging challenges” in the 2012-2020 Strategic Plan resulted in faculty hires and institutional investments and development of strength in five of these priority areas:
 - Global Environmental Change and Human Health
 - Genomics and Public Health
 - Obesity, Food, Physical Activity, and Health
 - Public Health Implementation Science
 - Social Determinants of Health

Weaknesses

- A criticism (particularly from faculty in the more quantitative fields in the School) of the 2012-2020 Strategic Plan was that implementation of the Plan focused too much on funding new initiatives and not enough on reinforcing current strengths, and providing all members of the SPH community with the support they needed to thrive. As a result, particular effort was made during the development of the 2020-2025 Strategic Plan to engage those groups that felt disenfranchised or “left behind” by the previous Plan, and to ensure that the new Plan focused on reinforcing the strong core. These two priorities are reflected both in the KRAs in the 2020-2025 Strategic Plan and the financial commitments that have been made to support these KRAs.
- When SPH launched the 2020-25 Strategic Planning process, it was found that a number of core constituents within the School were unaware of the (substantial) progress that had been made towards a number of the goals outlined in the 2012-2020 Strategic Plan. To address this going forward, the School plans to launch a dashboard on the SPH web site that will track progress towards the goals of the 2020-2025 Strategic Plan.

Plans for improvement

Each KRA Outcome in the 2020-25 Strategic Plan has been assigned a lead—all are senior faculty or staff members. During Summer Quarter 2020, leads defined progress metrics and milestones for Academic Year 2020-21 for their KRA Outcome, working with the vice dean for strategy, faculty affairs, and new initiatives and the manager of strategic initiatives, who are charged with ensuring continued forward progress of the Strategic Plan. In addition, the group of leads has established a regular meeting schedule, to update each other on progress and share best practices across the KRA Outcomes. Updates from those meetings will be used to populate the dashboard noted above. Finally, updates at departmental faculty meetings, School-wide webinars, and other venues are

planned for regular updating of the SPH community. Thus, regular monitoring of progress and plans to hold the SPH community accountable have been written into the 2020-2025 Strategic Plan. At the end of the first year, progress in each KRA Outcome, with a goal of Public Health Impact, will be evaluated and outcome measures redefined as necessary.

B2. Graduation Rates

1) Graduation rate data for each degree in unit of accreditation. See Template B2-1.

Students in Bachelor Degrees, by Cohorts Entering Between 2017-2018 and 2019-2020				
*Maximum Time to Graduate: 3 years				
	Cohort of Students	2017-2018	2018-2019	2019-2020
2017-2018	# Students continuing at beginning of this school year (or # entering for newest cohort)	296		
	# Students withdrew, dropped, etc.	15		
	# Students graduated	1		
	Cumulative graduation rate	0.3%		
2018-2019	# Students continuing at beginning of this school year (or # entering for newest cohort)	280	248	
	# Students withdrew, dropped, etc.	9	14	
	# Students graduated	206	0	
	Cumulative graduation rate	69.5%	0.0%	
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	65	234	322
	# Students withdrew, dropped, etc.	0	0	0
	# Students graduated	52	171	0
	Cumulative graduation rate	87.5%	69.0%	0.0%

Students in Master of Public Health Degrees, by Cohorts Entering Between 2014-2015 and 2019-2020

***Maximum Time to Graduate: 6 years**

	Cohort of Students	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
2014-2015	# Students continuing at beginning of this school year (or # entering for newest cohort)	164					
	# Students withdrew, dropped, etc.	7					
	# Students graduated	3					
	Cumulative graduation rate	1.8%					
2015-2016	# Students continuing at beginning of this school year (or # entering for newest cohort)	154	187				
	# Students withdrew, dropped, etc.	5	8				
	# Students graduated	105	3				
	Cumulative graduation rate	65.9%	1.6%				
2016-2017	# Students continuing at beginning of this school year (or # entering for newest cohort)	44	176	186			
	# Students withdrew, dropped, etc.	0	4	12			
	# Students graduated	28	138	1			
	Cumulative graduation rate	82.9%	75.4%	0.5%			
2017-2018	# Students continuing at beginning of this school year (or # entering for newest cohort)	14	34	173	206		
	# Students withdrew, dropped, etc.	2	1	6	10		
	# Students graduated	5	28	128	1		
	Cumulative graduation rate	86.0%	90.4%	69.4%	1.0%		
2018-2019	# Students continuing at beginning of this school year (or # entering for newest cohort)	10	5	39	194	188	
	# Students withdrew, dropped, etc.	1	0	0	0	0	
	# Students graduated	2	3	30	141	7	
	Cumulative graduation rate	87.2%	92.0%	85.5%	69.4%	37.0%	
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	2	6	45	177	209
	# Students withdrew, dropped, etc.	0	0	0	0	0	0
	# Students graduated	0	2	2	20	116	2
	Cumulative graduation rate	86.2%	93.0%	86.6%	79.1%	65.4%	1.0%

Students in Master of Science Degrees , by Cohorts Entering Between 2014-2015 and 2019-2020							
*Maximum Time to Graduate: 6 years							
	Cohort of Students	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
2014-2015	# Students continuing at beginning of this school year (or # entering for newest cohort)	47					
	# Students withdrew, dropped, etc.	3					
	# Students graduated	0					
	Cumulative graduation rate	0.0%					
2015-2016	# Students continuing at beginning of this school year (or # entering for newest cohort)	44	50				
	# Students withdrew, dropped, etc.	0	6				
	# Students graduated	28	1				
	Cumulative graduation rate	59.6%	2.0%				
2016-2017	# Students continuing at beginning of this school year (or # entering for newest cohort)	16	43	42			
	# Students withdrew, dropped, etc.	0	1	3			
	# Students graduated	14	28	2			
	Cumulative graduation rate	89.4%	58.0%	4.8%			
2017-2018	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	13	37	43		
	# Students withdrew, dropped, etc.	0	0	2	1		
	# Students graduated	1	11	24	2		
	Cumulative graduation rate	91.5%	80.0%	61.9%	4.7%		
2018-2019	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	3	11	40	45	
	# Students withdrew, dropped, etc.	0	0	1	0	0	
	# Students graduated	0	2	8	16	0	
	Cumulative graduation rate	93.5%	85.7%	81.0%	74.4%	0.0%	
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	1	2	9	43	62
	# Students withdrew, dropped, etc.	0	0	0	0	0	0
	# Students graduated	1	1	0	6	25	0
	Cumulative graduation rate	93.6%	86.0%	81.0%	88.4%	55.6%	0.0%

Students in Doctoral Degrees , by Cohorts Entering Between 2010-2011 and 2019-2020											
*Maximum Time to Graduate: 10 years											
	Cohort of Students	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
2010-2011	# Students continuing at beginning of this school year (or # entering for newest cohort)	56									
	# Students withdrew, dropped, etc.	0									
	# Students graduated	0									
	Cumulative graduation rate	0.0%									
2011-2012	# Students continuing at beginning of this school year (or # entering for newest cohort)	56	50								
	# Students withdrew, dropped, etc.	3	0								
	# Students graduated	0	0								
	Cumulative graduation rate	0.0%	0.0%								
2012-2013	# Students continuing at beginning of this school year (or # entering for newest cohort)	53	50	64							
	# Students withdrew, dropped, etc.	1	0	2							
	# Students graduated	3	1	0							
	Cumulative graduation rate	5.4%	2.0%	0.0%							
2013-2014	# Students continuing at beginning of this school year (or # entering for newest cohort)	49	49	62	61						
	# Students withdrew, dropped, etc.	4	0	1	2						
	# Students graduated	13	3	0	0						
	Cumulative graduation rate	28.6%	8.0%	0.0%	0.0%						
2014-2015	# Students continuing at beginning of this school year (or # entering for newest cohort)	32	46	61	58	53					
	# Students withdrew, dropped, etc.	0	0	1	1	2					
	# Students graduated	17	11	8	0	0					
	Cumulative graduation rate	58.9%	30.0%	12.5%	0.0%	0.0%					

Students in Doctoral Degrees , by Cohorts Entering Between 2010-2011 and 2019-2020											
*Maximum Time to Graduate: 10 years											
	Cohort of Students	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
2015-2016	# Students continuing at beginning of this school year (or # entering for newest cohort)	15	35	52	57	49	52				
	# Students withdrew, dropped, etc.	0	1	3	3	0	0				
	# Students graduated	10	17	14	2	1	0				
	Cumulative graduation rate	76.8%	64.0%	34.4%	3.3%	2.0%	0.0%				
2016-2017	# Students continuing at beginning of this school year (or # entering for newest cohort)	5	17	35	52	48	52	57			
	# Students withdrew, dropped, etc.	0	0	1	0	1	0	2			
	# Students graduated	3	8	16	8	3	0	0			
	Cumulative graduation rate	82.1%	80.0%	59.4%	16.7%	7.8%	0.0%	0.0%			
2017-2018	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	9	18	44	44	52	55	70		
	# Students withdrew, dropped, etc.	0	0	0	3	3	2	3	3		
	# Students graduated	0	6	7	16	9	1	0	0		
	Cumulative graduation rate	82.1%	92.0%	70.3%	43.3%	25.5%	1.9%	0.0%	0.0%		
2018-2019	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	2	11	25	32	49	52	67	58	
	# Students withdrew, dropped, etc.	0	0	0	0	0	0	0	0	0	
	# Students graduated	0	2	9	12	20	14	2	1	0	
	Cumulative graduation rate	82.1%	96.0%	84.4%	62.3%	51.0%	15.4%	1.8%	1.4%	0.0%	
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	1	3	14	14	35	48	63	55	72
	# Students withdrew, dropped, etc.	0	0	0	0	0	0	0	0	0	0
	# Students graduated	0	1	0	9	6	18	8	0	0	0
	Cumulative graduation rate	82.1%	98.0%	84.4%	77.0%	73.0%	63.5%	17.5%	1.4%	0.0%	0.0%

2) Data on doctoral student progression in the format of Template B2-2.

	Biostatistics	Biostatistics: Statistical Genetics	Environmental and Occupational Hygiene	Toxicology	Epidemiology
# newly admitted in 2020	8	0	3	1	32
# currently enrolled (total) in 2020	53	3	17	10	98
# completed coursework during 2019	10	0	4	3	16
# in candidacy status (cumulative) during 2019	22	4	6	10	50
# graduated in 2019	10	1	2	4	21

	Global Health: Implementation Science	Global Health Metrics	Pathobiology	Health Services	Nutritional Sciences	Public Health Genetics
# newly admitted in 2020	10	3	7	5	0	3
# currently enrolled (total) in 2020	31	13	30	30	1	7
# completed coursework during 2019	14	2	2	5	0	0
# in candidacy status (cumulative) during 2019	6	6	15	12	1	2
# graduated in 2019	2	3	5	10	0	2

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.

All SPH degree programs meet or exceed the expected minimum graduation rates (template B2-1) defined by the maximum time to completion.

The majority of students in the public health baccalaureate degree programs enter the program as rising juniors and graduate in about two years. The maximum time to graduation for bachelor's is three years. Using the presented template and additional information from prior years provides a robust picture of high graduation rates. Indeed, the cumulative graduation rates at three years for the entering classes between 2012-2013 and 2017-2018 are between 83.1 and 93.3 percent, well in excess of the 70 percent minimum.

The majority of Master of Public Health (MPH) and Master of Science (MS) students graduate within three years. For all masters degrees the official maximum time to graduation is six years. The most recent cumulative graduation rates at six years are 86.2 percent for the MPH, and 93.6 percent for the MS degrees. These are well in excess of the 70 percent minimum.

Finally, for doctoral (PhD) students, most students take about five years to graduate. The official maximum time to graduate is ten years, with most recent cumulative graduation rates at ten years being 82.1 percent, in excess of the 60 percent minimum.

Template B2-2 shows the progression of doctoral students, using 2020 and 2019 data. Two of the PhD programs in SPH have grown significantly in recent years: Global Health Implementation Sciences, which was launched in 2012, and Epidemiology, which is a long-standing program.

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

Strengths

- A clear strength is that graduation rates for all degree programs are high. Reasons for longer time to graduate or non-graduation are not systemic, but rather a result of individual circumstances.
- Time to graduation is carefully tracked by all programs. One advantage of having so many relatively small degree programs is that student-support staff at the program and department level and faculty directors of programs are in frequent contact with students and are able to intervene or serve as a resource when students are experiencing difficulties.
- One example of an outstanding student-support service that exists School-wide is the Epidemiology/Biostatistics preparatory workshop that is provided for all entering graduate students in the week before Autumn Quarter begins. This session is available to entering students who want to brush up on basic math skills to support their performance in the quantitative basis of the introductory Epidemiology and Biostatistics sequences. In addition to basic math skills, the workshop provides an introduction to R program as well as to a range of free in-person and online resources to support their course learning during the academic year.
- Individual tutoring, sponsored by the Office of the Dean, is also available to students showing early signs of academic difficulty in core courses. Students can work with their instructor or advisor to access the tutoring roster, and through arrangement with the office of the Dean can receive this support without cost to the student.
- The UW also provides centralized supports for undergraduate students, underrepresented students, international students, student veterans, and students with a diagnosed disability who self-identify with the UW Disability Resources for Students (DRS) office. For example, graduate students of color are supported by GO-MAP (Graduate Opportunities and Minority Achievement Program), which recently celebrated its 50th anniversary and is known for its positive impact on the students it supports: <https://grad.uw.edu/equity-inclusion-and-diversity/go-map/>. Students also take advantage of tutoring programs in other departments such as the library writing centers.

Plans for improvement

- A disadvantage of the decentralized management and support structure of the School is that student-support services are not even across departments and programs. Addressing this issue has been identified as a priority in the 2020-2025 Strategic Plan.

B3. Post-Graduation Outcomes

1) Data on post-graduation outcomes (employment or enrollment in further education) for each degree. See Template B3-1.

Post-Graduation Outcomes	2016-17 Number and percentage*	2017-18 Number and percentage**	2018-19 Number and percentage***
MPH			
Employed	51 (28%)	109 (63%)	102 (55%)
Continuing education/training (not employed)	7 (4%)	18 (10%)	8 (4%)
Not seeking employment or not seeking additional education by choice	0 (0%)	2 (<1%)	0 (0%)
Actively seeking employment or enrollment in further education	3 (2%)	9 (5%)	14 (8%)
Unknown	118 (66%)	35 (20%)	62 (33%)
Total graduates (known + unknown)	179 (100%)	173 (100%)	186 (100%)
Employed, using a denominator of those for whom we have data	51 (84%)	109 (93%)	102 (82%)
MS			
Employed	13 (24%)	20 (53%)	17 (39%)
Continuing education/training (not employed)	3 (6%)	2 (5%)	4 (9%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	1 (2%)	0 (0%)	0 (0%)
Unknown	37 (69%)	16 (42%)	23 (52%)
Total graduates (known + unknown)	54 (100%)	38 (100%)	44 (100%)
Employed, using a denominator of those for whom we have data	13 (76%)	20 (100%)	17 (81%)
Other Master's			
Employed	58 (84%)	0 (0%)	50 (71%)
Continuing education/training (not employed)	0 (0%)	0 (0%)	1 (1%)
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%)	3 (4%)
Unknown	11 (16%)	87 (100%)	16 (23%)
Total graduates (known + unknown)	69 (100%)	87 (100%)	70 (100%)
Employed, using a denominator of those for whom we have data	58 (100%)	n/a	50 (93%)
PhD			
Employed	23 (56%)	15 (38%)	41 (68%)
Continuing education/training (not employed)	2 (5%)	4 (10%)	1 (2%)
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%)	1 (2%)	1 (2%)
Unknown	16 (39%)	20 (50%)	17 (28%)
Total graduates (known + unknown)	41 (100%)	40 (100%)	60 (100%)
Employed, using a denominator of those for whom we have data	23 (92%)	15 (95%)	41 (95%)

Post-Graduation Outcomes	2016-17 Number and percentage*	2017-18 Number and percentage**	2018-19 Number and percentage***
Public Health Bachelor's			
Employed	56 (22%)	165 (62%)	139 (54%)
Continuing education/training (not employed)	17 (7%)	22 (8%)	19 (7%)
Not seeking employment or not seeking additional education by choice	2 (0.8%)	9 (3%)	3 (1%)
Actively seeking employment or enrollment in further education	7 (3%)	4 (2%)	7 (3%)
Unknown	167 (67%)	65 (25%)	91 (35%)
Total graduates (known + unknown)	249 (100%)	265 (100%)	259 (100%)
Employed, using a denominator of those for whom we have data	56 (68%)	165 (98%)	139 (83%)
Other			
Employed	9 (24%)	2 (7%)	28 (58%)
Continuing education/training (not employed)	1 (3%)	0 (0%)	0 (0%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	0 (0%)
Actively seeking employment or enrollment in further education	2 (5%)	0 (0%)	4 (8%)
Unknown	26 (68%)	27 (93%)	16 (33%)
Total graduates (known + unknown)	38 (100%)	29 (100%)	48 (100%)
Employed, using a denominator of those for whom we have data	9 (75%)	2 (100%)	28 (88%)

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 School has met the target of 80 percent employment or enrollment in further education for almost all categories of degree programs in the last three years, when using a denominator of those for whom there is data. On the other hand, a clear limitation is that the numbers of individuals for whom post-graduate outcomes are unknown is large. SPH has been working to address this issue, as can be seen from the lower percentage of unknown for most categories of degree programs for 2018-19 compared to the prior two years.

The methodology for obtaining these post-graduate outcomes has recently changed. Between 2014 and 2019, the School of Public Health Office of the Dean sent an electronic survey every summer to graduates in the previous academic year to ascertain post-graduation outcomes.

Starting in 2019, the SPH protocol for tracking post-graduate outcomes was overhauled, to begin both sooner and include active follow-up culminating in the one-year post-graduation sweep. The new protocol is as follows:

1. A new data entry portal has been created for entering alumni post-graduation outcomes at multiple time points.
2. Emphasis on use of LinkedIn. Messages concerning the importance of joining and updating status on the UW SPH LinkedIn Group are sent just prior to graduation. Information on the LinkedIn Group is monitored and abstracted monthly.
3. Use of the final class in Spring Quarter to initiate the process of obtaining post-graduation outcomes: Program by program, faculty engage with students in their final class (or as part of their final check list for graduation with their advisors) regarding post-graduation plans. Faculty emphasize the importance of joining the LinkedIn Group.

4. Immediately after graduation: SPH sends all graduates a 'Stay in Touch' message after graduation. Graduates are directed to the SPH [Advancement page](#) to update their personal contact information, which includes employment information. The LinkedIn Group is reemphasized.
5. Three months post-graduation: For those with unknown outcomes after steps 3 and 4, SPH programs send targeted emails soliciting the outcome information. The emails come from their specific program staff. Programs supplement missing information using a variety of methods.
6. Six, nine, and twelve months post-graduation: Procedures described in step 5 are repeated for those whose outcomes remain unknown.

The goal of the new protocol is to reduce the number of graduates for whom SPH does not have data (shown as "unknown" in template B3-1). Using the survey information augmented by the information assembled from multiple sources using the current protocol, the number of students with known outcomes has been growing. Of these, the percent of SPH PhD graduates with positive outcomes (continuing education or employment) rates are above 95 percent. The MPH and MS programs achieved positive outcome rates of 94 percent or above. The most recent public health bachelor's graduates for whom SPH has data achieved positive outcome rates of 88 percent, according to the partial data currently available.

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

Strengths

- The response rate for the postgraduate outcome surveys has been gradually increasing over the last seven years as the SPH has continuously upgraded methods for soliciting the information. In July 2019, the latest protocol for ascertaining these outcomes was rolled out (as noted above). However, the full benefit of the new protocol will likely not be realized until the CEPH Annual Report of 2021, at which time the new protocol will have been in place for more than a year.

Plans for improvement

- Additional plans are underway to improve the employment prospects for SPH graduates. These include, within the Epidemiology department, offering new professional development courses for students, currently being developed. Goals are to: 1. provide students with resources and skills to enhance their success in the job market; 2. promote the development of professional skills and strategies required in a professional public health career; 3. expose students to a variety of career trajectories in public health; and 4. provide resources to assist students with determining their professional path following completion of their degree program.
- The School has provided central support to bring regular career programming to the School on a quarterly basis. In addition to workshops, leadership development opportunities, and mentorship programs, the coordination by the School of career supports within departments has added more resources available to students overall. A priority identified during this most recent Strategic Planning and from student surveys and alumni interviews is to hire a Careers Associate Director position who would further engage the practice community, and support both students and recent alumni in career development.

B4. Alumni Perceptions of Curricular Effectiveness

1) Summarize the findings of alumni self-assessment of success in achieving competencies and ability to apply competencies after graduation.

Alumni Interviews 2019

The SPH conducted more than 30 alumni qualitative phone interviews of individuals who had graduated within the past one to six years (as of October 2019). Alumni were selected to include representatives from all SPH departments and programs (bachelor's, master's, and doctoral). The 30 interviews represent a 30 percent response rate. They were also selected to be reflective of jobs in nonprofit and for-profit organizations, academia and research, and government. They were asked which courses and assignments had been useful or would have been useful in their careers and to provide any additional comments about their experiences as students in this School. Although the responses were diverse and often reflected the differences in concentration, there were several consistent themes. The following is a summary of the most frequent responses from these alumni.

Almost every respondent stated that they have greatly benefited in their current jobs from the courses they took in Epidemiology and Biostatistics, both introductory and advanced courses. These courses provided useful skills in project development, data analysis and cleaning, writing reports, and working in teams. A number of alumni expressed that they could have benefitted from additional courses in coding, covering a greater variety of statistics programs, in working with large data sets, and in grant writing. Many of the alumni who were able to take courses in grant writing expressed that they were very helpful.

Those alumni that had completed a thesis or dissertation felt their projects helped improve writing skills, further taught them how to develop a research question and study design, do data collection and analysis, work in teams, and apply principles learned in the classroom to their research. Some stated the importance of learning mixed research methods from their thesis or dissertation experiences.

Many of the alumni strongly supported having opportunities to work with outside agencies and organizations in order to gain hands-on experience. They cited the importance of their practicum, capstone, or internship experiences to their current positions and thought there should be more opportunities for students to do internships with industry and with community-based organizations. Many of the alumni felt that students need more exposure to careers outside of academia, research, and government, and stressed the importance of "getting non-UW perspectives." Further, they felt that students would benefit from a greater focus on professional development and career counseling. They cited a need for career fairs and workshops, alumni networking, alumni groups on social media, and student mentoring by alumni. Comments supported these ideas, and included the importance of networking in general, building connections, working with community partners and stakeholders, training in how to market skills, and getting help finding work after graduation.

Most of the alumni thought that the SPH should provide more professional development and courses on management skills, including how to develop a project plan, timeline, budget, and manage people. Some mentioned the need for training in business administration, leadership skills, and how to coordinate with stakeholders and clients. They also frequently mentioned the importance of scientific and technical writing skills, and the importance of knowing how to write op-eds, press-releases, policy briefs, informative brochures, infographics, and information sheets. They also cited the importance of knowing how to communicate with diverse audiences, doing public speaking, and making presentations.

Many of the alumni thought that the most valuable courses took a hands-on approach and were more applied in that they involved problem-solving and using real data. They cited case-based learning, real-world problem solving and group projects, field trips and field work, and the need for experience conducting a “real-life” applied assessment. Several alumni thought they would have greatly benefited from a “community-based methods course.”

Quite a few of the alumni thought their courses on social determinants of health and public health policy were very valuable. Some cited the importance of learning about ethics and inequalities in public health. Finally, a few of the alumni thought there needed to be better overall guidance by departments during the first years and more awareness of available resources at UW. Some thought there should be more joint class offerings with courses outside of departments and the SPH because “more public health jobs are interdisciplinary.”

2) Provide full documentation of the methodology and findings from alumni data collection.

Alumni Interview Methods

SPH conducted qualitative interviews with alumni to gather feedback on curriculum effectiveness. The goal of conducting alumni key informant interviews, was an effort to gain a robust sense of 1. how different degree programs prepared alumni for careers in public health across different professional sectors (i.e., research/academia, nonprofit, for-profit, and government); and 2. what courses, resources, or materials would have been useful from the SPH.

Data collection began with departmental and program contacts providing a list of ten alumni who were from 1. different degree programs (e.g., BS, BA, MPH, MS, PhD, and joint degree programs); 2. graduated one to six years prior to the request; 3. entered various public health career paths (e.g., nonprofit, academia/research, for-profit, government); and 4. were geographically representative (e.g., northern, southern, eastern, and western U.S.). In total, departments provided contact information on 99 alumni. All alumni were contacted via email to explain the goal of the alumni interviews, procedures, and to schedule their phone interview. In total, 30 alumni participated in the survey.

Trained interviewers consisted of seven SPH staff and students from diverse backgrounds with experience conducting qualitative interviews. The semi-structured survey instrument consisted of two parts. Part one provided background information on the alumni (e.g., degree(s) and certificate(s) earned, graduation year(s), and employment information post-graduation). Part two consisted of open-ended questions and probes used to elicit information on reasons for selecting SPH, courses, and assignments that were most practical post-graduation, courses and resources that would have been helpful to their career, and general feedback on how SPH can better support students and alumni in the public health workforce.

The interviews were completed within four weeks, October-November 2019. Interviews lasted between 30-60 minutes in length and interviewers wrote detailed notes on alumni responses. Data management was centralized and coordinated by assigned staff, and survey responses were aggregated into one database with personal identifiers removed.

Additional materials included in the Electronic Resource File:
Electronic Resource File\Criterion_B\B4.2.

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

Strengths

- The innovation introduced in 2019 of conducting a qualitative interview to selected alumni across multiple degrees using individualized approaches was highly successful. The results SPH obtained from this effort are substantive and actionable in a way a quantitative survey of graduating students typically does not provide, despite its larger reach. The competency survey conducted by the School for all graduating students in May each year directly asks the students to rate their level of competency for each specific SPH, CEPH, or degree-specific competencies. Based on the successful adoption of the qualitative Alumni Survey of Curricular Effectiveness in 2019, the School will continue this approach to gathering data on alumni self-assessment of their competency development and application in practice.
- Some of the classes specifically bring back alumni as guest speakers, to augment the students' appreciation of survival skills in the real world. One example is PABIO 553: Survival Skills for Scientific Research, which regularly invites alumni of the pathobiology program. Melissa Gunnarson, MS, RD, CD is an alumna of the Nutritional Sciences program, and guest lectures regularly on infant, toddler, and child nutrition, newborn screening, feeding relationships, and food allergies. Lina Pinero Walkinshaw, MPH, is an alumna of the MPH Community-Oriented Public Health Practice degree and teaches the lab portion of NUTR 531: Public Health Nutrition, and is the current MPH in Nutrition capstone advisor.
- The MPH Common Core, described in detail in sections D1 and D2, has been re-envisioned to improve the skill sets of SPH's MPH graduates to better fit the needs of local and state health departments seeking to hire them. It is anticipated that alumni surveys starting in 2022 will begin to show improved self-efficacy in the CEPH Foundational Competencies across the board, while retaining the high self-efficacy for skills in rigorous research methods.

Weaknesses and Plans for improvement

- Some of the concerns raised by alumni have been addressed by meeting the new CEPH competencies in courses throughout the School. The need for these changes was based on critical student evaluations as well as on feedback from public health practice community colleagues.
- Other modifications to the curriculum are underway to keep the course offerings current with changing challenges in public health education. For example, a new data science option for graduate students is planned. This data science option will include courses in coding and working with big data sets (under development), in addition to existing courses on learning to code in R (BIOST 509: Introduction to R for Data Analysis in the Health Sciences, BIOST 534: Statistical Computing) and working with big data sets (BIOST 544: Introduction to Biomedical Data Science, BIOST 545: Biostatistical Methods for Big Omics Data, BIOST 546: Machine Learning for Biomedical and Public Health Big Data, BIOST 558: Statistical Machine Learning for Data Scientists).
- Writing skills have been a major recent focus for the SPH Curriculum and Educational Policy Committee (CEPC) resulting in a recommended addition of a list of resources for improving writing skills to all course syllabi. The list of writing skills resources are courses or online tutorials for improving overall writing skills, especially for international students. Finally, the Biostatistics department is developing a new course, focused on writing and communication, to be listed as BIOST 503: Writing and Presentation Skills for Biostatistics, to augment those specific to its programs: BIOST 579: Data Analysis and Reporting, BIOST 590: Biostatistical Consulting, BIOST 596: Biostatistics Capstone I, Project Planning, and BIOST 597: Biostatistics Capstone II, Project Implementation.
- SPH is initiating a data summit in the 2020-21 academic year to investigate and coalesce the successful practices and common questions being asked of alumni in various surveys administered across the School. The expected outcome of the summit is a coordinated approach that will reduce potential survey fatigue on students and alumni while providing robust, comprehensive data from soon-to-be and recent graduates.

B5. Defining Evaluation Practices

- 1) Present an evaluation plan that, at a minimum, lists the school's evaluation measures, methods and parties responsible for review. See Template B5-1.**

The first template included below shows the goals for the new strategic plan 2020-25 outcomes and plans for the first year of implementation.

1. Collective Culture of Meaningful Change
2. Education for Leadership and Transformation
3. Methods to Research to Practice Continuum
4. Equity, Justice, and Anti-Racism
5. Reputation and Visibility
6. Public Health Impact

Going forward, the School's progress will be evaluated based on these goals.

The goals and strategies in the 2016 update to the UW SPH 2012-2020 Strategic Plan were used as the basis for assessing progress since the last accreditation review. These are:

1. Revisit and prioritize emerging challenges, and marshal interdisciplinary resources to tackle big population-health problems.
2. Revise (interdisciplinary) masters-level curricula to reflect rigorous preparation for research and practice career paths.
3. Improve administrative infrastructure.
4. Improve effectiveness and success of SPH leaders.
5. Improve financial resources and infrastructure.

These goals and strategies are included here as a baseline from which to measure progress of the recent past. The specific areas of instruction, scholarship, and service, as well as student success are addressed mainly by goals 1 and 2, and supported by activities in goals 3, 4, and 5.

Strategic Plan: 2020-2025		
Evaluation measures	Identify data source(s) and describe how raw data are analyzed and presented for decision making*	Responsibility for review
Goal: Collective Culture of Meaningful Change		
Outcome 1. UW SPH has a culture that supports ongoing development and growth.	In year one: a framework will be completed for a faculty development plan; best practices will be identified for staff development; new, consistent onboarding for new faculty andn staff School-wide	Year one planning includes a single assigned point person to lead this effort, working with faculty, staff, and students to achieve year-one benchmarks.
Outcome 2. UW SPH has a student-centered culture.	In year one: document current student services offerings and processes for working with students; create inventory of informal student programs	Overall, the vice dean of strategy, faculty affairs, and new initiatives, reporting to the dean, has overall responsibility for ensuring targets are met to achieve these 2025 outcomes.
Outcome 3. UW SPH has a culture of well-being and connection.	In year one: new building and consolidation of offices; create plan for reconnecting post COVID-19	
Goal: Education for Leadership and Transformation		
Outcome 1. UW SPH will offer consistent academic, professional, and personal support across all degree programs.	In year one: creating student survey to measure current student services being offered in all departments and programs, to analyze data to determine where improvements will be implemented	Year one planning includes a single assigned point person to lead this effort, working with faculty, staff, and students to achieve year-one benchmarks.
Outcome 2. UW SPH will adopt best practices for student financial support; defined as students having the support they need to complete their degree program.	In year one: creating student survey to measure current financial services being offered in all departments and programs, to analyze data to determine where improvements will be implemented	Overall, the vice dean of strategy, faculty affairs, and new initiatives, reporting to the dean, has overall responsibility for ensuring targets are met to achieve these 2025 outcomes.
Outcome 3. UW SPH will deliver high-quality evidenced-based education across all degree programs.	In year one: improvements made to current peer-evaluation models; creating instructor mentoring program (including teaching assistants)	
Goal: Methods to Research to Practice Continuum		
Outcome 1. UW SPH will celebrate important work across the continuum from fundamental methodologies to the development and implementation of evidence-based strategies for understanding and changing complex health systems.	In year one: faculty and students will be engaged School-wide to define success and create framework of the continuum	Year one planning includes a single assigned point person to lead this effort, working with faculty, staff, and students to achieve year-one benchmarks.
Outcome 2. UW SPH will continue to conduct cutting-edge work in methods and research, with priorities implemented according to a roadmap created by the SPH Research Council.	In year one: the Research Council will define research plan priorities and build roadmap to success	Overall, the vice dean of strategy, faculty affairs, and new initiatives, reporting to the dean, has overall responsibility for ensuring targets are met to achieve these 2025 outcomes.
Outcome 3. At UW SPH, deep collaborations among faculty, staff, students, and key stakeholders result in successful models of academic practice.	In year one: a new Practice Council will be created; and a mapping will be completed of the current state of practice education	

Strategic Plan: 2020-2025		
Evaluation measures	Identify data source(s) and describe how raw data are analyzed and presented for decision making*	Responsibility for review
Goal: Equity, Justice, and Anti-Racism		
Outcome 1. The EDI Roadmap is implemented and our progress is shared with key stakeholders, increasing our visibility and reputation as a School that prioritizes equity, diversity, and inclusion.	In year one: develop dashboard to track progress	Year one planning includes a single assigned point person to lead this effort, working with faculty, staff, and students to achieve year-one benchmarks. Overall, the vice dean of strategy, faculty affairs, and new initiatives, reporting to the dean, has overall responsibility for ensuring targets are met to achieve these 2025 outcomes.
Outcome 2. With guidance from community members, principles of anti-racism are adapted in our public health work.	In year one: working with anti-racism leaders, create common, School-wide understanding of the role of anti-racism in public health, academia, and leadership	
Outcome 3. Structures and policies are in place at the School and improved to facilitate the recruitment and retention of underrepresented faculty and staff, especially those who identify as black and/or indigenous.	In year one: recruit, retain, and provide networking opportunities for faculty and staff who identify as BIPOC (black, indigenous, and people of color)	
Goal: Reputation and Visibility		
Outcome 1. The reputation and visibility of UW SPH increases through use of a unified narrative across School communications which promotes the School's strengths, expertise, and unique programs.	In year one: establish baseline understanding of the School among external audiences; develop unified and branded narrative for the SPH	Year one planning includes a single assigned point person to lead this effort, working with faculty, staff, and students to achieve year-one benchmarks. Overall, the vice dean of strategy, faculty affairs, and new initiatives, reporting to the dean, has overall responsibility for ensuring targets are met to achieve these 2025 outcomes.
Outcome 2. Coordination and alignment of UW SPH and department and program marketing and communication activities are maximized, delivering more effective messages of real-world impact to all our audiences.	In year one: audit current marketing and communication activities to analyze for revisions	
Outcome 3. Public audiences and alumni are meaningfully engaged in the UW SPH community and giving back financially.	In year one: create and implement digital engagement strategy	
Goal: Public Health Impact		
Outcomes and measures to be identified.	To be identified.	Year one planning includes working with faculty, staff, and students to finalize the outcomes and benchmarks. The vice dean of strategy, faculty affairs, and new initiatives, reporting to the dean, is responsible for ensuring targets are met to achieve 2025 outcomes.

Strategic Plan: 2012-2020		
Evaluation measures	Identify data source(s) and describe how raw data are analyzed and presented for decision making*	Responsibility for review
Goal: Revisit and prioritize emerging challenges, and marshal interdisciplinary resources to tackle big population-health problems		
Are the strategic research areas identified in the 2012-20 plan still the right ones?	Survey conducted with faculty and staff for input in deciding which challenges to focus on, based on initial 2012 strategic plan; 2015 annual retreat with school leadership	Dean and office of the dean leadership team
Have faculty hires in the strategic areas identified in the original 2012-20 plan been made?	Data compiled on searches conducted, pool of candidates, number of individuals interviewed, offers made, and faculty hired for each strategic area	Dean, departmental chairs, office of the dean leadership team
Have faculty hired in strategic areas been successful in catalyzing research in these areas at UW SPH?	Each faculty member who was hired as a "strategic hire" is required to submit a report on activities after 5 years in position; in case where a new center was established as a result of strategic hire, a five year of center is also conducted	Dean, departmental chairs, office of the dean leadership team
Goal: Revise (interdisciplinary) masters-level curricula to reflect rigorous preparation for research and practice career paths		
Do the existing MPH core classes align with new MPH competencies?	Faculty and curriculum committee reviewed current syllabi and identified gaps and provide overarching recommendations for how to address (AY 2017-18)	Curriculum and Educational Policy Committee; MPH Re-envisioning Committee Phase 1
Do proposed MPH core classes align with the new MPH competencies?	Faculty and curriculum committee review general proposals for new MPH core courses (AY2018-19) and detailed syllabi (AY2019-20) to ensure they are aligned with new MPH competencies	Curriculum and Educational Policy Committee; MPH Re-envisioning Committee Phase 2; MPH Core Steering Committee
Does the MPH practicum experience align with new CEPH criteria?	Student, employer, and practicum site feedback. Feedback is presented to committee for discussion	Practicum Committee
Do the new MPH core courses achieve what they were intended to do or are further modifications needed?	Evaluation plan for MPH core drafted in AY2019-20, to be implemented in AY2020-21; includes review of course and program evaluation surveys	MPH Core Steering Committee and Curriculum and Educational Policy Committee
Do our faculty have the training in student-centered and active-learning teaching techniques needed to successfully launch the new core?	Student course surveys and feedback on proposed core courses (via Open Houses during planning phase) were used to develop an instructor professional development plan that is being rolled out during AY2019-20 in conjunction with UW Center for Teaching and Learning (CTL)	MPH Core Steering Committee and Curriculum and Educational Policy Committee

Strategic Plan: 2012-2020		
Evaluation measures	Identify data source(s) and describe how raw data are analyzed and presented for decision making*	Responsibility for review
Are our MPH programs being administered in a way that is both cost effective in addition to serving the needs of our students?	Model financial implications of implementing new MPH core courses and how overall cohort size and size of individual programs impact financial sustainability of programs (AY2018-19); review current administrative structures for MPH programs and student academic services in departments; make recommendations re: opportunities to improve services at same or reduced cost (AY2018-19)	MPH Administration Curriculum and Curriculum and Educational Policy Committee, dean, department chairs, office of the dean leadership team
Goal: Improve administrative infrastructure		
Are essential activities needed for successful administrative functioning available across the school?	Staffing grid created by workgroup (AY2015-16) and used to identify overlaps and gaps	Assistant dean for finance and administration; departmental administrators
Are HR practices across the school consistent with University policies and procedures?	SPH HR processes mapped out and aligned with campus policies and practices as part of onboarding of new campus HR tool, "Workday" (AY2017-18 and AY2018-19)	Office of the dean leadership team in conjunction with new UW Integrated Service Center; department administrators
Are academic HR practices across the school consistent with University policies and procedures?	SPH AHR processes mapped out and aligned with campus policies and practices and known best practices for recruiting and retaining diverse faculty (AY2019-20)	Vice dean for strategy and faculty affairs and SPH HR manager in conjunction with UW academic HR, department chairs and departmental HR managers
Are financial practices across the school consistent with University policies and procedures?	SPH financial processes being mapped out and aligned with campus policies and practices as part of campus "Financial Transformation" (AY2018-19 and AY2019-20)	Office of the dean leadership team in conjunction with UW Financial Transformation workgroup and department administrators
Goal: Improve effectiveness and success of SPH leaders		
Do we have in place systematic succession planning and a strong pipeline for future leaders in teaching, research and administration?	Annual hiring proposals from departments reviewed with eye towards succession planning; opportunities to include vice or associate chairs in critical conversations and decision making prioritized by dean and chairs; associate deans to solicit input from stakeholder groups about desired faculty professional development workshops and activities	Dean and office of the dean leadership team in conjunction with department chairs

Strategic Plan: 2012-2020		
Evaluation measures	Identify data source(s) and describe how raw data are analyzed and presented for decision making*	Responsibility for review
Are SPH students, faculty, and staff aware of changes occurring in the school and opportunities to provide input into decisions?	Open rates for critical email communications and participation rates in town halls and input sessions are monitored; dean, associate deans, and chairs check regularly with faculty and student committees to assess whether communication pathways are working and revise/augment communication strategies as necessary; dean and associate deans attend faculty and staff meetings to receive input and gauge concerns on key issues	Dean; SPH director for communications; department chairs; faculty council; DACS
Do SPH students, faculty, and staff feel like their input is taken into consideration when critical decisions are made?	Climate survey of faculty, staff, and students; dean, associate deans and chairs check regularly with faculty and student committees to assess climate issues	Dean; assistant dean for equity, diversity and inclusion; Equity, Diversity, and Inclusion Committee
Goal: Improve financial resources and infrastructure		
Are we providing the right incentives for faculty to teach those classes that generate significant revenue for the school?	Engage faculty in conversations about incentives (AY2019-20); use information to develop faculty workload expectations and compensation model that is aligned with values and incentivizes desired behavior (AY2019-20); evaluate trends in student credit hours taught (ongoing)	Dean and office of the dean leadership team in conjunction with department chairs; Faculty Council
Do we provide the supports necessary for faculty to be optimally effective in obtaining research grants?	Input gathered from members of SPH Research Council regarding gaps and needs (AY 2019-20) and used to prioritize future investments in research support	Associate dean for research in conjunction with SPH Research Council
Do we offer the degree programs that prospective students want?	Hire consultants to conduct market analysis for degree programs (AY2019-20) and use this information to inform decisions about which programs to combine or phase out and which degrees to add or enhance	Dean and office of the dean leadership team in conjunction with department chairs and program directors; MPH Core Steering Committee

2) Briefly describe how the chosen evaluation methods and measures track the school's progress in advancing the field of public health (including instruction, scholarship and service) and promoting student success.

The process used to monitor implementation of the 2012-2020 Strategic Plan included a retreat that took place in the summer of 2015. Specific strategies for focus in 2016-2018 were identified and consensus achieved to support them. Working groups (activity groups) were created for each of the six prioritized strategies.

The confirmation of the strategic research areas, and the prioritization of strategic hire areas resulted in tracking of the hires themselves and of the subsequent research in the areas. There were successful strategic hires in five of the six areas and six centers of research were created in each of the six areas, as described more fully in B6.1.

Ongoing tracking of success in the big challenges of the previous Strategic Plan areas is now led by the vice dean for strategy, faculty affairs, and new initiatives. Ongoing support of research by faculty-led initiatives is provided within the Office of the Dean at the associate dean of research level. The responsibility includes serving as a liaison with research entities within SPH and between SPH and the UW, including the UW Research Advisory Board.

The use of the evaluation measures for the second goal (related to master's level curricula) grew out of the very successful expansion of undergraduate education of the School. Some of the changes in the public health bachelor's degrees were driven by the goal of bringing public health into the consciousness of all students, and indeed all citizens of the State of Washington. In particular, many of the methods used to collaboratively craft and refine the new Public Health-Global Health major and embed evaluation within its implementation were adopted in the newly re-envisioned MPH Common Core. Quarterly training for the new MPH Common Core instructors began in Autumn Quarter 2019 and included evidence-based teaching, best practices in team teaching, and student focused learning.

Work to improve the effectiveness of SPH leaders included implementing two strategies. Systematic succession planning for future leaders has been included at both the School-level and the department-level. Responsibility for leadership is now shared amongst a larger team of individuals. Secondly, a six module ten-week program was rolled out in 2016 to provide a solid foundation for further individual and team leadership development. This training has been repeated every year since its initiation with new cohorts of faculty and administrators. Work on improved communication—both disseminating outward, and listening inward is ongoing. The goal is to improve transparency, demonstrate clear accountability, and improve trust.

Financial resources and infrastructure improvement work was woven in with SPH's Strategic Investment initiative. Existing grant and Activity Based Budgeting (ABB) revenue streams have shown steady growth since 2015. Revenue from undergraduate programs and classes has doubled, in part due to tripling of student credit hours (more students, more classes) since 2013. This was in part a response to the campus-wide shift to an ABB model for allocating resources to schools, which was fully implemented for the fiscal year 2013-14. Under ABB, revenue returned to the School rises directly in proportion to increases in the number of student credit hours taught and the number of majors enrolled.

The goals of the 2020-2025 Strategic Plan directly tie to advancing the public health field and student success (as shown in B1.1). Each of the outcomes has a series of benchmarks to achieve in each year of the five-year plan. At the time of this writing, the team overseeing the new plan is developing a dashboard to monitor progress.

- 3) **Provide evidence of implementation of the plan described in Template B5-1. Evidence may include reports or data summaries prepared for review, minutes of meetings at which results were discussed, etc. Evidence must document examination of progress and impact on both public health as a field and student success.**

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_B\B5.3.

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

Strengths

- As outlined above, School-wide efforts in tackling big population health problems research efforts, in MPH redesign, and in financial stability and leadership are areas of strength. Additionally, in 2020, the School completed a new strategic planning process to build on its strengths, using a process of assessment, visioning, and prioritization to assure continued success in advancing the field of public health along with student achievement.
- The language of the evaluation measures as outcome measures for the 2020-2025 Strategic Plan and the explicit short-term plans for tracking progress as illustrated in the first part of template B5-1 is a strength and a springboard for improvement in this area.

Plans for improvement

- At the time of this writing, a new (part-time) associate dean position (associate dean for evaluation and improvement) is under review by the Office of the Provost. This position is intended to support the SPH in its efforts of measurement and evaluation across the departments and programs, as well as in the Office of the Dean. With this support, the School will be better positioned to develop processes; protocols; procedures for acquiring, analyzing, disseminating, and acting upon data related to our 2020 Strategic Plan; as well as other School-wide plans, such as our Equity, Diversity and Inclusion (EDI) Action Plan and plans under development by the Research Council. .

B6. Use of Evaluation Data

- 1) Provide two to four specific examples of programmatic changes undertaken in the last three years based on evaluation results. For each example, describe the specific evaluation finding and the groups or individuals responsible for determining the planned change, as well as identifying the change itself.

Tackling Big Population Health Problems

The first goal of the 2016 update to the 2012-2020 Strategic Plan was to “revisit and prioritize emerging challenges and marshal interdisciplinary resources to tackle big population health problems.” Six emerging challenges in public health research and education, that would greatly advance the field of public health, were identified as part of the strategic planning process in 2011, and reaffirmed in 2015. As was stated in B1, public health problem priority areas identified were global environmental change and human health; genomics and public health; obesity, food, physical activity and health; health policy and health systems; public health implementation science; and social determinants of health. Strategic faculty hires were completed in five of the six areas identified in the 2012-2020 Strategic Plan. These faculty provide expertise in each of those areas to lead cores or centers of faculty both within SPH and across the UW Seattle campus and are listed in the table below.

<i>Center, Collaborative, or Program</i>	<i>New Faculty Hires</i>
Center for Health and the Global Environment (CHANGE)	Kris Ebi, inaugural director
Institute for Public Health Genetics (IPHG)	Alison Fohner, assistant director
Collaborative on Obesity Research & Action (CORA)	Jessica Jones-Smith, leader
Implementation Science Program	Bryan Weiner, leader
Health and Society (THINK)	Anjum Hajat, co-leader

In the area of health policy science a new center was created (Center for Health Innovation and Policy Science) that pulled together existing faculty. These additions augment the array of research centers associated with SPH, also dedicated to tackling big population health problems in order to advance the field of public health.

MPH Re-Envisioning

The new MPH Common Core curriculum being implemented in Autumn Quarter 2020 directly addresses Goal 2. This new Common Core consists of six new courses developed by the MPH Re-Envisioning Steering Committee and faculty and staff working groups during 2018-2019. This curriculum employs a more student-centered, integrated approach to teaching and learning that will better serve students and enable the UW to remain competitive in the evolving MPH marketplace. An important motivating factor for creating this curriculum was the new CEPH competency-based accreditation criteria and that all MPH programs needed to meet these new requirements. As of Autumn Quarter 2020, all UW MPH state-supported programs require students to take the Common Core to ensure MPH graduates have the analytic skills and practical competencies necessary to be productive, effective, and transformational public health leaders, scientists, and practitioners. The School is committed to continuous improvement such that the skills and knowledge that all SPH graduates possess be attractive to local and state health departments, national and international organizations, as well as community partners who would like to hire them.

Effectiveness and Success of SPH leaders

Improving the effectiveness of SPH leaders was Goal 4. A SPH Leadership Development Program for faculty and staff was recommended by department chairs and implemented in 2018. Effectiveness of leadership has also been informed by a School-wide climate survey administered in 2018. Based on the results of that survey, the School implemented focus groups of faculty, and additional efforts to support faculty, staff, and students. Included in leadership development is diversity development.

Workshops, trainings, informal lunches, and ad hoc activities have focused on understanding racism and systemic gender bias. Sponsored trainings for SPH leadership have been designed to help move the needle toward creating a more positive climate for equity, diversity, and inclusion. Under the leadership of the assistant dean for equity, diversity, and inclusion, SPH has implemented policies to guide the confidential reporting of harassment, intimidation, microaggressions, and other behaviors that contribute to an unsafe climate.

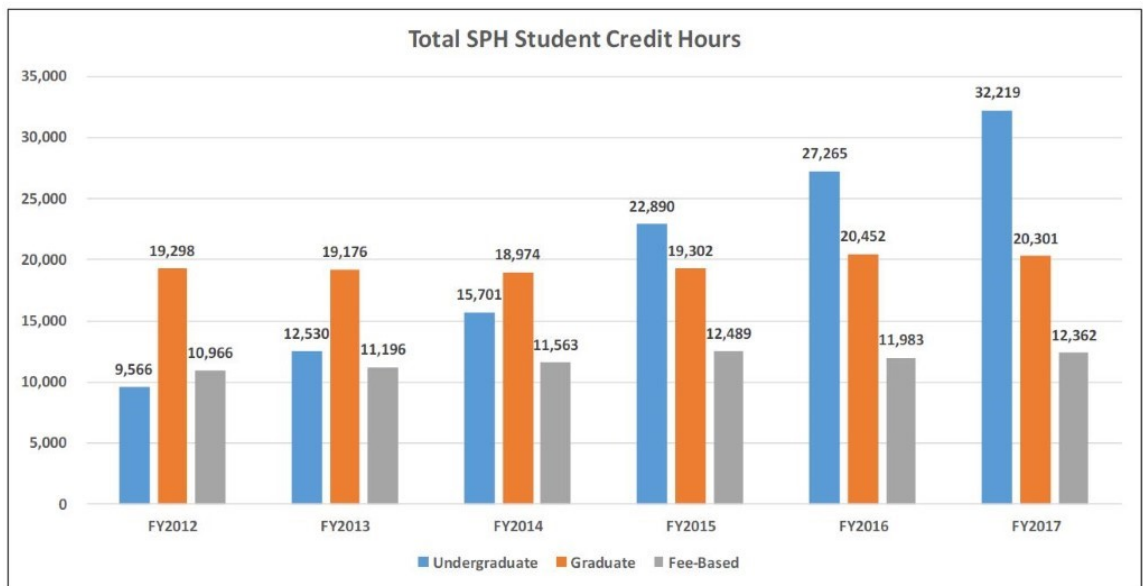
Plans for developing more effective leaders has also been informed by the development and adoption of the Anti-Racism competency in SPH. The Anti-Racism competency is another example of changes implemented, based (in part) on evaluation findings. SPH conducted a broad stakeholder survey three times over the last dozen years (2008, 2017, 2018) to assess the climate of the School. Results from these surveys (described in more detail in section G1.6), in conjunction with specific student initiatives combined to motivate the creation of a School-wide competency, that was ultimately shepherded through the Curriculum and Education Policy Committee in early 2016. The language of the competency was recommended to CEPH in September 2016.

Financial Stability

Goals 3, 4, and 5 revolve around assuring financial stability and informed, visionary leadership of the School. The emphasis on improving administrative infrastructure (Goal 3) provides the necessary scaffolding to assure support for students, faculty, programs, and departments across the School. A major contribution to meeting Goal 3 was accomplished by the adoption in 2017 by SPH of a University-wide change to human resources and payroll processing (“Workday”). Workday is a cloud-based system that centralizes and standardizes human resources and payroll processes across the entire UW. As a result of this transition, SPH has a better window on human resource processes used across the School and has made significant strides towards standardizing these processes and aligning them with best practices for recruiting and retaining a diverse workforce.

Goal 5 focuses on financial stability. Many of the successes in the area of financial stability can be attributed to growth in research grant funding and growth in revenue related to the success of the undergraduate programs. For example, the undergraduate Public Health-Global Health major has increased enrollment over the past two years, growing to a current average enrollment of 500 students, driven by a demand from students for instruction in public health thinking and doing. Additionally, the Nutritional Sciences Program started an undergraduate degree program in Food Systems, Nutrition, and Health in 2018. The popularity of the program’s minor in Nutrition for undergraduate students (focusing on the intersection of food studies, food systems, and population health) has led to the creation of this new major that admitted its first cohort of 29 students in Winter Quarter 2019. Demand for this major has soared, with 181 students declared in the major in Spring Quarter 2020. The enrollment in the undergraduate major in Environmental Health is above 60, and in the Health Informatics and Health Information Management baccalaureate degree enrollment is more than 90 students.

At the same time, stable and strong enrollment in SPH graduate programs has contributed to the School’s financial stability.



Total School of Public Health Student Credit Hours from FY2012 to FY2017.

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

Strengths

- The mid-period retreat that took place in 2015 allowed specific strategies to be developed for the 2012-2020 Strategic Plan, which were focused on during 2016-2018. This retreat was critical not only for the articulation of specific strategies but also to creating the activity groups that followed through on the strategies and developed the consensus needed achieved to support them.

Weaknesses and Plans for improvement

- Despite the significant progress made on the specific strategies developed for the 2012-2020 Strategic Plan, ownership for the strategies was fairly diffuse. Several leadership transitions occurred in the Office of the Dean during 2018-2020, and, as a result, continuity for some of the implementation and evaluation process was compromised. The synergistic timing of the Self-Study and the development of the 2020-2025 Strategic Plan, helped to identify that SPH needs to have a single individual on the leadership team responsible for oversight of evaluation activities across the School. As noted in B5.4, at the time of this writing, a new (part-time) associate dean position is under review by the Office of the Provost.
- The School is currently in the process of implementing the new MPH Common Core curriculum. The importance of measuring, evaluating, monitoring, and implementing any new program cannot be overstated. The MPH Steering Committee has crafted a robust plan for evaluation of not only the courses but also for the re-envisioned MPH degree overall to ensure the School is meeting the needs of MPH students in a thoughtful and academically-challenging way. It is critical to be agile in adapting a new curriculum in light of lessons learned in the first two to three years. Noted below is the current assessment plan.

Program Evaluation			
Component	Purpose	Method	Timing
Entering student survey	Identify student goals and expectations	Integrated with program/department survey	MPH core orientation, September 2020
End of year one student survey	Assess quantitative and qualitative mid-way point delivery	Google form distributed via email	End of Spring Quarter 2021
End of year one student focus groups	Discuss PHI courses; what went well and suggestions for improvement	3 Focus groups of ~10 people	End of Spring Quarter 2021
End of year two student survey - graduate survey integrated with department/program surveys	Assess overall degree: were goals and expectations met	Integrated with program/department survey	Once applied to graduate, end of Spring quarter 2022
Alumni survey	Lookback on degree, suggestions for improvements	Integrated with program/department survey	Sent 1 year & 3 years after graduation
Faculty-Staff Retreat	Faculty will meet to discuss outcomes from program	Assessment Report	Retreats in September
MPH Steering Committee	Steering Committee to review and discuss outcomes	Assessment Report	Toward beginning of academic year to assist with goal setting
Core Instructor Work Group meetings	To review and discuss student outcomes, working with TAs, course development, and integration of case studies/cross-cutting themes	Facilitated discussion	2 times per quarter

Course Evaluation			
Component	Purpose	Method	Timing
Midway course/instructor/TA feedback by students	Brief questions regarding student learning	Facilitated discussion; facilitator captures on written feedback form using CTL methods	Week 5, quarterly
End of course UW course evaluation	Quantitative student survey Qualitative student survey	Distributed by the UW Office of Educational Assessment Program to add new questions	Week 10, quarterly

Faculty Evaluation			
Component	Purpose	Method	Timing
Core faculty peer teaching evaluations	Assess use of evidence based teaching	Observation of class, completes written feedback form	Once per instructor per year
Department faculty evaluation	Assess teaching and promotion criteria	Reviewed by Program Director	Required every year for Asst Professors

TA Evaluation			
Component	Purpose	Method	Timing
End of course UW student survey	Brief questionnaire regarding TA support to students	Distributed by the UW Office of Educational Assessment Program to add new questions	Week 10, quarterly
Faculty evaluation of TA	Asses teaching and support of students	Written feedback form	Week 10, quarterly

Criterion C

C1. Fiscal Resources

1) addresses the following, as applicable:

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

The School pays for faculty salaries through a mixture of tuition, grants, State supplementary funds, self-sustaining program funds, and gift endowments. Under the new faculty compensation policy, the proportion of funding from each source depends on the appointment type. The exact formula for each individual faculty member is based on actual research grants awarded, number of classes taught, etc. In aggregate, grants cover approximately 54 percent of faculty salaries. Approximately 40 percent comes through tuition and State supplementary funds, 4 percent through self-sustaining programs, and 2 percent through gift endowments. As stated in Criterion A1, expectations around research, teaching, mentoring, and service are included in the new faculty compensation policy.

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_C.

- b) **Briefly describe how the school 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.**

The School annually submits an academic hiring plan to the Office of the Provost. Any requests for additional faculty hires must be included in this plan. After review and approval, the School is free to pursue each of the hires specified in the plan, following established UW and SPH hiring protocols. Additional staff are hired solely at the discretion of the School, based on need and available funding.

- c) **Describe how the school funds the following:**

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

Operational costs include School and departmental administration costs, such as salaries for faculty in administrative positions and administrative staff, and faculty development expenses. The School pays for these with tuition, State supplementary funds, directed State funds, and indirect cost recovery funds. One of the SPH departments, Global Health, also carries an expendable gift fund, which is used annually to support various operational costs.

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

The largest amount of student support comes through a mixture of student employment, research and training grants, and tuition waivers.

Many research grants allow the School to employ graduate students as research assistants (RA), giving students both practical research experience and financial compensation. The School employs about 450 students as RAs, teaching assistants (TA), or graduate student assistants (GSA) annually, and about 130 of these are TAs employed for one or more quarters. Some grants, particularly training grants, also allow full or partial tuition to be paid directly through the grant. In total, over \$3.7 million in tuition payments are provided through grants annually.

The importance of the [National Research Service Award](#) (NRSA) and [Health Resources and Services Administration](#) (HRSA) training grants and fellowships is recognized and supported financially and by contributed effort at department and School levels. At the time of this writing, these awards and training grants support 23 post-doctoral fellows and 26 pre-doctoral students in the UW School of Public Health.

State of Washington law dictates that UW employees and employees of the State of Washington, employed at 50 percent FTE or more are eligible for all or partial class tuition to be waived. The program is administered by the UW Office of the Registrar: <https://registrar.washington.edu/course-registration/state-employee-tuition-exemption/>. Both RAs and TAs receive partial tuition waivers through this program (e.g., out of state tuition is waived downwards to in-state levels) as additional compensation for their work. Tuition waivers total approximately \$4.5 million annually. In addition, direct compensation for TA/RA positions totals over \$8 million annually, including benefits.

The School pays for direct student scholarships and gifts in much the same way as operational costs. The School annually dedicates \$200,000 in scholarships for master's students paid out of operating funds. Annual awards include six \$20,000 scholarships for master's students. Each scholarship is for \$10,000 per year and each student receives two years of funding. In addition, the School also awards eight \$10,000 scholarships (\$5,000 per year for two years). Most of these scholarships go to MPH students, however, MS students are also eligible. There is no set distribution by degree.

Gift endowments provide about \$50,000 in further student scholarships. In addition, the departments each hold modest gift endowments (e.g., \$10,000-20,000) which are used to help support students. The School also receives approximately \$200,000 in funding each year for PhD students from the UW Office of the Provost through the Graduate School. SPH makes a best effort to cover tuition for all doctoral students, through a combination of scholarships, training grants, and TA/RA positions (which include both stipends and tuition waivers). These efforts, however, do not annually cover all tuition for all doctoral students.

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

Faculty development expenses are covered by operational costs, as described above in section C1.c.a. In addition, departments share portions of indirect cost recovery funds with research-active faculty, and allocate their discretionary monies from the SPH operational budget or from department portion of indirect cost recovery as was described in Criterion A1.2.f.

Faculty receive financial support for a range of activities, including matching funds for Population Health Initiative pilot grants, State orientation tours for new faculty, conference travel for faculty and/or their graduate students. Faculty who are developing new courses, or are planning to use new approaches to student learning often receive department support. Faculty who are branching out into new areas of research often receive indirect cost recovery at the UW-level from the [Royalty Research Fund](#), or from calls for proposals as part of the [Population Health Initiative](#). For example, Epidemiology, and occasionally Global Health, will make funds available to a faculty member to go to conferences related to teaching or public health practice.

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

The University allocates most operating funds through an Activity Based Budgeting (ABB) model, which distributes tuition based on Student Credit Hours (SCH) and student enrollment. Indirect cost recovery (ICR) funds are returned formulaically to all schools at UW from the Office of the Provost. Directed State funds are passed directly to the School. Supplemental State funds are allocated at the discretion of the Office of the Provost, though that discretion is generally based on prior year allocations. The total allocation to the School from the Office of the Provost in academic year 2019-20 was \$4,829,927. While the School may occasionally ask for and receive additional funding for specific projects, in general, the University does not maintain a central initiative fund to be tapped by its schools.

The State of Washington legislature may authorize special proviso funds for specific studies or activities. The School has one longstanding State proviso of Medical Aid and Medical Accident funding, totaling \$7 million per year. These funds obligate the School to undertake occupational training and environmental testing activities for entities across the State. From time to time, the School also sees much smaller State provisos, of approximately \$100,000 to \$250,000, for distinct policy-related studies (e.g., air quality at airports, vaping impact on youth).

The School also engages in fundraising activities aimed at establishing endowments for specific purposes. The most common purposes are endowed professorships and direct student support. Success in fundraising varies from year to year, but has ranged around \$1-2 million per year in recent years. Endowments are invested centrally and operating funds paid out of endowments at approximately 4 percent annually.

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

State-supported programs are supported by tuition, part of which comes from the State. Tuition rates are set by the Board of Regents, and are funded in part through the State allocation provided for students who are residents of the State of Washington. Tuition is divided by the Office of the Provost into relevant tuition 'pools' by program and tuition category (e.g., undergraduate, Law, Medicine, etc.). The Office of the Provost retains 30 percent of the tuition for general administrative expenses. For undergraduates, the University retains an additional 5 percent of the undergraduate tuition for funding scholarships. Eighty percent of the remaining tuition pool funds are dispersed to schools according to their share of Student Credit Hours (SCH) taken by their students of the courses that fall within a given tuition pool category. The other 20 percent of funds are dispersed to schools according to their share of student enrollment (or graduation for undergraduates) for that tuition pool category.

Operational student fees (e.g., student activity fees) are generally retained centrally and passed directly to the relevant administrative units.

The School also offers a number of fee-based programs. Each of the fee-based programs operates as if it is a stand-alone program, with a distinct and separate budget. Fee-based programs are not state-funded. As a result, the UW Provost in consultation with the Faculty Senate (through its Faculty Senate Committee on Planning and Budgeting) determine the fees to cover the full cost of instruction. All tuition fees from these programs are collected by a central unit, the UW Continuum College (UWCC). Teaching costs, including faculty salaries, related to the fee-based program, are carried in a UWCC budget, rather than by the School. At the end of the fiscal year, program teaching costs are netted against program tuition fees, and the net revenue is turned over to the School. The net revenue returned is typically 5-8 percent of the total tuition fees and is money that is used to generally support School activities.

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

The Office of the Provost retains 65 percent of Indirect Cost Recovery (ICR) funds and returns 35 percent to the School. The School, in turn, distributes ICR funds to its departments, to cover basic research administration costs. In addition, a fraction of ICR is returned to each department in proportion to the ICR that department generates. School departments then return small portions of their ICR share to individual faculty members, in the form of accounts available for individual faculty members to use for development and support costs not otherwise covered by the department. Formulae and practices for funding these individual accounts vary by department.

- 2) If the school is a multi-partner unit sponsored by two or more universities (as defined in Criterion A2), the responses must make clear the financial contributions of each sponsoring university to the overall school budget. The description must explain how tuition and other income is shared, including indirect cost returns for research generated by the school of public health faculty appointed at any institution.**

Not applicable to this School of Public Health.

- 3) A clearly formulated school 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.

Sources of Funds and Expenditures by Major Category, 2016 to 2020					
Source of Funds	2016	2017	2018	2019	2020
Tuition & Fees	17,613,119	17,707,489	18,705,282	21,590,327	23,144,693
State Appropriation	4,300,969	4,766,949	5,091,085	4,787,679	4,829,927
Grants/Contracts	102,134,161	108,961,743	121,363,197	129,956,521	125,748,541
Indirect Cost Recovery	6,663,796	6,614,768	6,841,643	7,358,184	7,852,705
Endowment	1,038,663	1,333,690	1,000,368	1,000,242	783,185
Gifts	1,766,817	2,097,096	2,025,921	1,736,898	2,816,385
Other (State Proviso -- MAA)	6,919,000	6,586,500	7,239,000	7,239,000	7,028,786
Total	140,436,525	148,068,235	162,266,496	173,668,851	172,204,223
Expenditures	2016	2017	2018	2019	2020
Faculty Salaries & Benefits	32,471,181	34,642,691	36,570,424	39,327,860	40,791,172
Staff Salaries & Benefits	51,046,336	54,343,738	58,455,319	59,361,533	60,292,293
Operations	1,443,423	966,202	621,377	822,353	822,353
Travel	6,266,270	7,177,403	7,458,102	7,839,626	5,972,922
Direct Non-Salary Grant Costs	40,377,952	41,201,918	49,018,928	53,605,274	51,605,274
Graduate Student Salaries & Benefits	8,532,121	9,850,684	10,408,402	12,692,406	12,924,464
Total	140,137,283	148,182,636	162,532,552	173,649,052	172,408,478

- 4) If the school is a multi-partner unit sponsored by two or more universities (as defined in Criterion A2), the budget statement must make clear the financial contributions of each sponsoring university to the overall school budget.

Not applicable to this School of Public Health.

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

Strengths

- The School rests on a stable financial foundation; both its teaching and its research activities provide substantial amounts of revenue annually to cover ongoing operations.

Weaknesses

- Federal grant funding as well as State funding can fluctuate for reasons outside of the control of the School.

Plans for improvement

- The School continues to explore opportunities for adding long-term revenue by expanding its programs to reach more students, particularly in non-urban areas. Plans to expand the state-supported MPH and the online MPH degree programs are currently being pursued.

C2. Faculty Resources

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

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY*
CONCENTRATION	PIF 1*	PIF 2*	FACULTY 3^	PIF 4*	PIF 5*	
Biostatistics	Kenneth Rice (1.0)	Katie Kerr (1.0)	Jon Wakefield (1.0)	Amy Willis (1.0)	NA	PIF: 12 Non-PIF: 6
MS						
PhD						
Biostatistics: Capstone	Kwun Chuen Gary Chan (1.0)	Marco Carone (1.0)	Adam Szpiro (1.0)	NA	NA	see Biostatistics: MS/PhD
MS						
Environmental & Occupational Health	John Scott Meschke (1.0)	Tania Busch Isaksen (1.0)	Peter Rabinowitz (1.0)	NA	NA	PIF: 5 Non-PIF: 8
MPH						
Environmental & Occupational Health: Applied Occupational Hygiene	Christopher Simpson (1.0)	Marissa Baker (1.0)	Martin Cohen (1.0)	NA	NA	see Environmental & Occupational Health: MPH concentration
MS						
Environmental & Occupational Health: Applied Toxicology	Evan Gallagher (1.0)	Julia Cui (1.0)	Zhengui Xia (1.0)	NA	NA	see Environmental & Occupational Health: MPH concentration
MS						
Environmental & Occupational Health: Exposure Sciences	Mike Yost (1.0)	Edmund Seto (1.0)	Christopher Simpson (1.0)	NA	NA	see Environmental & Occupational Health: MPH concentration
MS						
Environmental & Occupational Health: Occupational Hygiene	Christopher Simpson (1.0)	Marissa Baker (1.0)	Martin Cohen (1.0)	NA	NA	see Environmental & Occupational Health: MPH concentration
MS						
Environmental & Occupational Health: Occupational Medicine Residency	June Spector (1.0)	Peter Rabinowitz (1.0)	Debbie Cherry (0.5)	NA	NA	see Environmental & Occupational Health: MPH concentration
MPH						

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY*
CONCENTRATION	PIF 1*	PIF 2*	FACULTY 3^	PIF 4*	PIF 5*	
Environmental & Occupational Health: One Health MPH	Peter Rabinowitz (1.0)	Mike Yost (1.0)	Marilyn Roberts (1.0)	NA	NA	see Environmental & Occupational Health: MPH concentration
Environmental Health BS MS	Tania Busch Isaksen (1.0)	Gerard Cangelosi (1.0)	John Scott Meschke (1.0)	Terrance Kavanagh (1.0)	NA	see Environmental & Occupational Health: MPH concentration
Environmental Toxicology MS PhD	Thomas Burbacher (1.0)	Elaine Faustman (1.0)	Julia Cui (1.0)	Zhengui Xia (1.0)	NA	see Environmental & Occupational Health: MPH concentration
Environmental & Occupational Hygiene PhD	John Scott Meschke (1.0)	Lianne Sheppard (1.0)	Marissa Baker (1.0)	NA	NA	see Environmental & Occupational Health: MPH concentration
Epidemiology: Clinical and Translational Research MS	Christine Khosropour (1.0)	Amanda Phipps (1.0)	Brandon Guthrie (1.0)	NA	NA	see Epidemiology: MPH/MS/PhD concentration
Epidemiology: General MPH MS PhD	Ali Rowhani-Rabhar (1.0)	Amanda Phipps (1.0)	Stephen Mooney (1.0)	Stephen Schwartz (1.0)	NA	PIF: 10 Non-PIF: 10
Epidemiology: Global Health MPH	Ali Rowhani-Rabhar (1.0)	Stephen Hawes (1.0)	Jeffrey Stanaway (1.0)	NA	NA	see Epidemiology: MPH/MS/PhD concentration
Epidemiology: Maternal & Child Health MPH	Stephen Hawes (1.0)	Daniel Enquobahrie (1.0)	Anjum Hajat (1.0)	NA	NA	see Epidemiology: MPH/MS/PhD concentration

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY*
CONCENTRATION	PIF 1*	PIF 2*	FACULTY 3^	PIF 4*	PIF 5*	
Food Systems, Nutrition, and Health BA	Liz Kirk (1.0)	Jennifer Otten (1.0)	Yona Sipos (1.0)	NA	NA	program concentration faculty included in department numbers
Genetic Epidemiology MS	Sharon Browning (1.0)	Sara Lindstroem (1.0)	Bruce Weir (1.0)	NA	NA	program concentration faculty included in department numbers
Global Health: General MPH	Steve Gloyd (1.0)	Deepa Rao (1.0)	Nancy Puttkammer (1.0)	NA	NA	PIF: 8 Non-PIF: 12
Global Health: Health Metrics & Evaluation MPH	Steve Gloyd (1.0)	Nancy Puttkammer (1.0)	Bernardo Hernandez Prado (1.0)	NA	NA	see Global Health: MPH concentration
Global Health: Metrics & Implementation Science PhD	Kenny Sherr (1.0)	Bryan Weiner (1.0)	Susan Graham (1.0)	NA	NA	see Global Health: MPH concentration
Global Health: Pathobiology PhD	Lee Ann Campbell (1.0)	Olusegun Soge (1.0)	Jennifer Lund (1.0)	NA	NA	PIF: 1 Non-PIF: 5
Health Administration MHA	Sarah Cave (1.0)	Paul Fishman (1.0)	Dennis Stillman (0.5)	NA	NA	PIF: 3 Non-PIF: 15
Health Administration Executive eMHA	Sarah Cave (1.0)	Paul Fishman (1.0)	Dennis Stillman (0.5)	NA	NA	see Health Administration: MHA concentration
Health Informatics & Health Information Management BS MHIHIM	Carolyn Spice (1.0)	Jim Condon (1.0)	Clarence Spigner (1.0)	Carrie Kaelin (1.0)	NA	PIF: 1 Non-PIF: 4

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY*
CONCENTRATION	PIF 1*	PIF 2*	FACULTY 3^	PIF 4*	PIF 5*	
Health Services: Clinical and Translational Research	Larry Kessler (1.0)	Michelle Garrison (1.0)	India Ornelas (1.0)	NA	NA	see Health Services: MPH/MS/PhD concentration
MS						
Health Services: Community-Oriented Public Health Practice	Amy Hagopian (1.0)	Gita Krishnaswamy (1.0)	Christine Hurley (0.5)	NA	NA	see Health Services: MPH/MS/PhD concentration
MPH						
Health Services: General	Clarence Spigner (1.0)	Peggy Hannon (1.0)	Paul Fishman (1.0)	Barbara Baquero (1.0)	NA	PIF: 6 Non-PIF: 26
MPH						
MS						
PhD						
Health Services: Health Systems & Policy	Peggy Hannon (1.0)	Linda Ko (1.0)	Michelle Garrison (1.0)	NA	NA	see Health Services: MPH/MS/PhD concentration
MPH						
Health Services: Social & Behavioral Sciences	India Ornelas (1.0)	Barbara Baquero (1.0)	Hendrika Meischke (1.0)	NA	NA	see Health Services: MPH/MS/PhD concentration
MPH						
Health Services: Online MPH	Gita Krishnaswamy (1.0)	Jeff Harris (1.0)	Miruna Petrescu-Prahova (1.0)	NA	NA	see Health Services: MPH/MS/PhD concentration
OMPH						
Nutritional Sciences	Adam Drewnowski (1.0)	Jessica Jones-Smith (1.0)	Mario Kratz (1.0)	Cristen Harris (1.0)	NA	PIF: 2 Non-PIF: 3
MS						
PhD						
Public Health-Global Health	Sara Mackenzie (1.0)	Anjulie Ganti (1.0)	Jennifer Slyker (1.0)	NA	NA	PIF: 0 Non-PIF: 1
BA						
BS						

	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY*
CONCENTRATION	PIF 1*	PIF 2*	FACULTY 3^	PIF 4*	PIF 5*	
Public Health Genetics	Bruce Weir (1.0)	Sara Lindstroem (1.0)	Alison Fohner (1.0)	Tim Thornton (1.0)	NA	PIF: 0 Non-PIF: 3
MPH						
PhD						
Public Health Nutrition	Michelle Averill (1.0)	Anne Lund (1.0)	Anne-Marie Gloster (1.0)	NA	NA	see Nutritional Sciences: MS/PhD concentration
MPH						
Statistical Genetics	Tim Thornton (1.0)	Bruce Weir (1.0)	Kenneth Rice (1.0)	NA	NA	see Biostatistics: MS/PhD concentration
PhD						
TOTALS:	Named PIF	82				
	Total PIF	130				
	Non-PIF	93				

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.

All faculty FTE are calculated on a 12-month basis. Faculty that are non-primary instructional faculty in a degree program devote FTE according to the percent responsibility for teaching a course. The convention historically in the School is that 100 percent responsibility is associated with 4 percent per credit. Thus a 4-credit course has 16 percent FTE for 100 percent responsibility. For the Health Services: Community-Oriented Public Health Practice MPH program, only one primary instructional faculty is 1.0 FTE with SPH. The other two faculty are each at 50 percent FTE, so together they contribute a second full FTE in that program. For some of the interdisciplinary programs, the FTE support was calculated differently. In particular, two of the non-primary instructional faculty teaching in the Public Health Genetics masters and doctoral programs are each associated with 10 percent FTE.

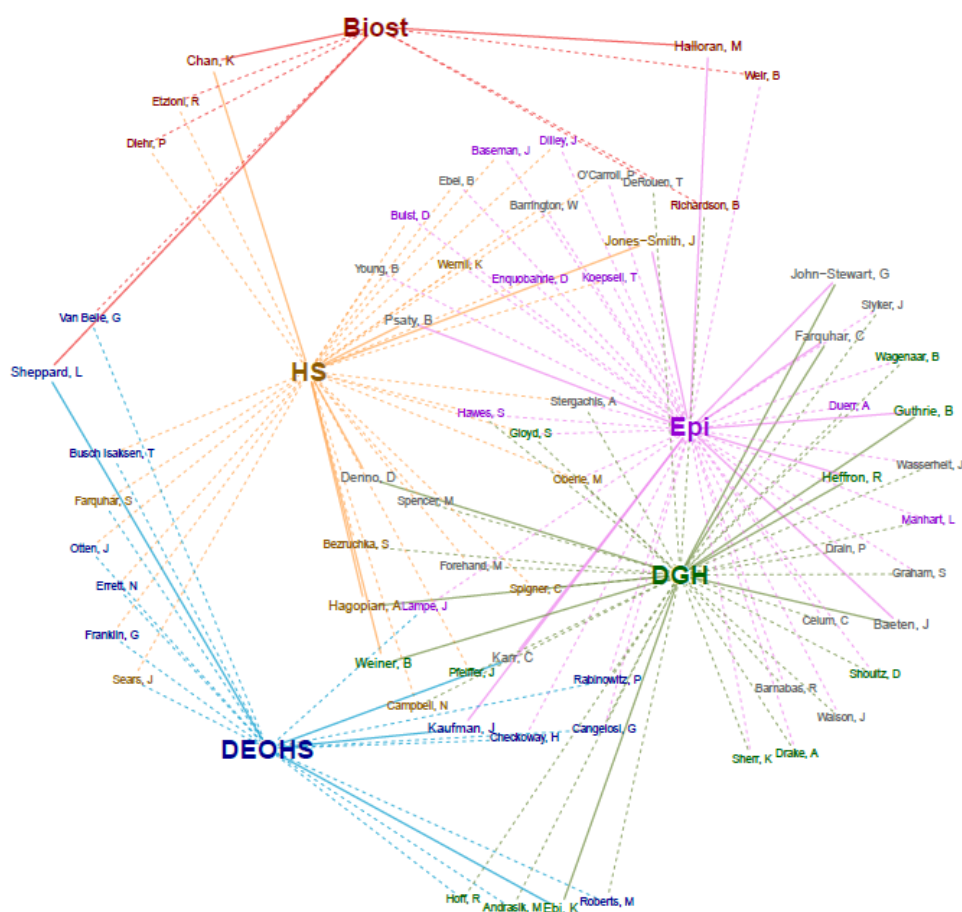
3) If applicable, provide a narrative explanation that supplements reviewers' understanding of data in the templates.

The SPH is privileged to have a rich breadth and depth of disciplines and areas of scholarly focus represented by its faculty, as can be seen from the related templates in Criterion E. SPH has 151 School-based core faculty as of May 2020 in regular, research, or teaching tracks. Of these, 130 qualify as Primary Instructional Faculty for one or two programs in template C2-1. The 151 School-based core faculty are faculty with full appointments that are primary in SPH. In addition, there are 98 regular or research faculty appointments (sometimes referred to as "joint" appointments that are paid "directly" by another institution, or through another unit at the University). Further, there are 211 adjunct faculty and 604 clinical and affiliate faculty, 93 of whom are also involved in SPH teaching programs, and included in counts of non-primary instructional faculty in the table.

SPH faculty are actively involved in teaching and, as template C2-1 shows, the lead teachers in all of the degree programs are faculty with full appointments primary in SPH. Over 100 core faculty members teach one or more classes each year and collectively teach two-thirds of the total classes and student credit hours annually. While these faculty members do have strong expertise in individual disciplines, a large number also operate through joint appointments (secondary appointments are sometimes full joint, but more often are adjunct appointments) in two or more SPH departments. The schematic below of faculty connections as of August 2020 was created to illustrate the complexity of the alignment of SPH faculty, and the multiple disciplines they represent either through training or career development and application to a variety of areas within public health.

Many SPH faculty also have joint appointments (including adjunct) with allied disciplines in medicine, nursing, psychology, pharmacology, environmental sciences, anthropology, etc. In addition, faculty members from those disciplines have joint appointments (including adjunct) in SPH. This cross-disciplinary network is brought to the classroom through more than 100 faculty from closely allied disciplines, who teach the remaining one-third of the SPH courses. This interdisciplinary network enhances student experiences beyond the classroom as well, due to the broader ability of faculty to connect students with grant research assistantships or mentoring possibilities across the UW.

SPH Joint/Dual Academic Appointment Network Graph



SPH Dual Appointment Network Map. This network map shows which faculty UW SPH have an adjunct (dashed line) or joint (bold lines) appointments in one or more of the other departments in the School. This diagram only shows joint and dual academic appointments between SPH departments. It does not include clinical non-salaried or endowment appointments. Faculty names shown in light grey do not have a primary appointment in SPH. Otherwise, primary appointments are shown in the color of the department, as identified. (Data source: UW Workday, 2020.08.03)

- 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.

General advising & career counseling				
Degree level	Average	Min	Max	
Bachelor's	1	1	6	
Master's	1.7	1	14	<i>primary faculty</i>
Doctoral	1.8	1		<i>non-primary faculty</i>
Mentoring/primary advising on thesis, dissertation or DrPH integrative project				
Degree	Average	Min	Max	
DrPH	n/a	n/a	n/a	
PhD	2.5	1	4	<i>primary</i>
PhD	1.2	1	4	<i>non-primary</i>
Master's other than MPH	1.5	1	5	<i>primary</i>
Master's other than MPH	1.3	1	5	<i>non-primary</i>
Advising in MPH integrative experience				
	Average	Min	Max	
	1.6	1	10	<i>primary</i>
	1	1	1	<i>non-primary</i>
Supervision/Advising of bachelor's cumulative or experiential activity				
	Average	Min	Max	
	1.5	1	9	

For graduate degrees, mentoring data is aggregated across all departments, and includes chairs of PhD and Master's theses committees. For undergraduate degrees, mentoring data reflects supervision of internships and honors projects for the Environmental Health and Public Health-Global Health degrees. More than 75 percent of primary faculty in SPH participate in some form of mentoring in any given year.

5) Quantitative data on student perceptions of the following for the most recent year. Schools should only present data on public health degrees and concentrations.

a. Class size and its relation to quality of learning (eg, The class size was conducive to my learning)

In May 2019, SPH emailed all students⁴ a link to a Quality of Learning Survey. One hundred and six individuals responded (from all SPH programs: bachelor's, master's, and doctoral). Questions about satisfaction had coded responses on a Likert scale of 1.0-5.0, with 5.0 as very satisfied, and additional open-ended questions were included. Among those who responded, the majority of students were satisfied or very satisfied (68.7 percent) with class size. On average, students in fee-based programs were significantly more satisfied than students in state-supported programs (mean score of 4.9 vs. 3.8, $p < 0.001$), which likely reflects the smaller average class size in fee-based programs afforded by the higher tuition levels. There were no significant differences in satisfaction with class size by degree level (undergraduate, masters, PhD) or department, even though graduate class sizes (largest about 170 students) are typically smaller than undergraduate class sizes (largest about 700 students).

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

From the Quality of Learning Survey administered in May 2019 (total respondents = 106), Likert scale of 1.0-5.0, with 5.0 as very satisfied) the majority (77.3 percent) of students were satisfied or very satisfied with the availability of faculty and with no significant differences by program funding source (state-supported vs. fee-based), degree level, or department.

6) Qualitative data on student perceptions of class size and availability of faculty. Only present data on public health degrees and concentrations.

Qualitative data about student perceptions of class size were obtained from the Quality of Learning Survey that was administered in May 2019. Total respondents were 106—41 of which were bachelor's students, 46 were master's students, and 19 were doctoral students. The least positive comments about class size were typically in reference to introductory public health courses (both undergraduate and graduate). Specific lower-rated comments from bachelor's students included, "I would prefer smaller class sizes," and, "With smaller classes I feel like you have to pay attention more." For master's they included, "Classes with more than 30-40 students make meaningful interaction with faculty difficult. It also tends to limit feedback on assignments due to faculty and TA time constraints. Faculty have generally been very available though." And one PhD student noted, "The classes are overcrowded! I think people learn best when they have one-on-one interactions in the classroom and this is very difficult in large lectures with 250+ students, like some of the core courses. Also, I have had the opportunity to take more specialized classes and experienced overcrowding there too. In one of my classes there were not enough seats available if everyone showed up. At a graduate level, I expected to learn from my colleagues through an open-discussion format (or problem-based learning) and not just learning through lectures where the professor talks at you."

⁴ "All students" references the entire SPH student body of about 1,700 students during Spring Quarter 2019. Including all degrees: bachelor's, master's, and PhD.

Responses suggest that course sections, as well as the availability of teaching assistants and faculty, do help mitigate, though not fully eliminate, lower satisfaction with larger courses. Opportunities for discussion and faculty interaction were reported to be inadequate in large courses, with some exceptions: some students in cohort-based programs commented that the cohort model helped facilitate effective classroom discussions even in large classes, as students had more shared experience and knowledge of each other. Students' comments about class size in reference to classes of 10-50 students are universally positive.

Likewise, qualitative data from the Quality of Learning Survey (2019) about student perceptions of availability of faculty are helpful. Student satisfaction with faculty, while high overall, is uneven; this comes across clearly from the comments in this section of the survey. Students report differences in individual faculty availability. Negative feedback varies from individual difficulties encountered with specific faculty (in a course or as an advisor), to more general issues (such as response time to student questions or assignments). One general complaint is that with limited numbers of faculty of color, those faculty members sometimes bear a larger advising burden than other faculty. Students of color often seek out faculty of color as formal or informal mentors. SPH efforts to address the issue of the need to grow a diverse faculty are described in detail in Criterion G.

A bachelor's student commented that it, "was good to have a variety of professors and faculty but not consistent enough in the program to foster continuous relationships." A master's student noted, "There are not enough faculty who are people of color, so faculty who are people of color are spending a lot of additional time mentoring and supporting students who are people of color. These faculty work really hard to be available to these students. If there were more faculty who are people of color, then their availability to students would improve and extra burden on their time would be lessened. Additionally, that extra effort should be compensated; one source is through funding that acknowledges the structural discrimination these faculty face in grant processes and buys out some of their time." And a PhD student noted, "My mentors have always responded within 24 hours of an email. On top of this, I am always able to pop into my PI's lab whenever needed."

Additional materials included in the Electronic Resource File:
Electronic Resource File\Criterion_C\C2.6.

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

Strengths

- SPH has a large faculty, the majority of whom embrace teaching responsibilities and didactic training.
- Interdisciplinary connections are a hallmark of the UW Seattle campus and this School, which is reflected intentionally in classroom teaching.
- Overall, students are satisfied with class sizes and faculty availability.

Weaknesses

- Faculty on average do a large amount of mentoring, however some do more than others. The mentoring load is especially high for faculty with exceptional reputations as mentors and for faculty of color. Students tend to ask these faculty more frequently for advising and mentoring.
- Larger classrooms designed specifically to facilitate active learning, are scarce across the University campus.

Plans for improvement

- SPH has implemented a new faculty compensation plan, effective July 1, 2020. The plan includes explicit mentoring expectations. One of the goals of the plan is to distribute more evenly the mentoring activity across all faculty.
- Three more 120+ person active learning classrooms will come into use by academic year 2023-2024 (see C4 below).
- Faculty development workshops are planned for the upcoming academic year and then annually. During these, faculty will be trained on mentoring to improve the overall quality of mentorship in the School and increase the number of mentors who are able to provide students with exceptional advising and mentorship.
- The SPH Equity, Diversity, and Inclusion Action Plan (detailed in Criterion G) includes an explicit goal of recruiting and hiring more faculty of color. This will help to relieve some of the pressure on current faculty of color by increasing the number of available mentors able to work with students.

C3. Staff and Other Personnel Resources

- 1) A table defining the number of the school'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.

Role/function	FTE
Academic Services	42
Admin Asst	17
Communications	16
Development	4
Finance/Admin/Ops	43
Human Resources	7
Info Tech	14
Total	143

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

The School operates with 143 administrative staff, including 42 student and academic services staff, spread between the Office of the Dean and the School's five departments. In addition, SPH has over 400 research staff. These staff are primarily dedicated to grant-funded research, while some also perform administrative tasks and a few that provide mentorship to those graduate students associated with the particular grant.

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

The School has sufficient numbers of administrative personnel for the ongoing operation of the School and is not experiencing shortages that materially reduce the School's collective abilities to teach students or engage in research. Financial stability, in the form of growing tuition and grant award revenue (see template C1-1), have allowed the School to increase staff since 2015.

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

Strengths

- In the recent response to the COVID-19 crisis, staff from across the School joined with faculty under the direction of the acting associate dean for education in an Academic Preparedness Workgroup. This workgroup, in addition to providing critical support within departments to assist faculty and staff to move classes online in the middle of an academic quarter (Winter 2020), also became a School-wide collaborative resource able to facilitate the School's swift adoption of Zoom and other related educational technologies of which many faculty, students, and staff were novice users. Though the capacity of any one department would have been strained to produce the comprehensive resource that was created, the collected skills, knowledge, and abilities were successfully synthesized at a time of great and immediate need.
- Excellence of staff in SPH is recognized annually at a School-wide Awards of Excellence celebration. Each department and program recognizes a staff member who has gone above and beyond to show adaptability, leadership, and teamwork in support of the unit mission. One staff member from this pool is selected as the School's Anderson O'Connell awardee receiving School-wide recognition. Many of these staff are also nominated as individuals or as teams to the UW Distinguished Staff Recognition (DSR) award program. It is common for two to three nominees in DSR to be members of the School of Public Health community. In 2013, a team from the Department of Global Health attached to a research project in one of the training centers received the team award. These are each counted as signs of the strength of contributions made by staff of the School.

Weaknesses and Plans for improvement

- The levels of staffing in the area of student and academic services differs across the departments and large interdisciplinary programs in the School. There are also differences in how the primary responsibilities of the staff are defined leading to uneven distribution of career counseling and experiential learning, for example. Consistent with priorities identified in our 2020-2025 Strategic Plan, SPH plans to conduct a wholesale evaluation of student and academic services and staffing across the departments and programs within the School during the 2020-21 academic year, to inform a plan for creating a higher-level of baseline student and academic services across the School.

C4. Physical Resources

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

a) Faculty office space

As of June 2020, the School of Public Health was distributed across 20 different locations. In August 2020, SPH moved into "The Hans Rosling Center for Population Health," which is in a central location on the main Seattle campus of the University. The majority of the School's faculty now occupy the new building. Roughly simultaneous to this move, the rest of the School is working to consolidate from the 20 existing locations around campus and across the city of Seattle, into nine of these existing locations. These consolidations will greatly benefit faculty collaboration, decrease walking and commute times between facilities, and improve student access to faculty. The Hans Rosling Center will also provide a more identifiable physical home for the School. This building includes three classrooms and a variety of informal study areas to draw students from across the programs and facilitate cross-fertilization of ideas and learning.

Additional materials included in the Electronic Resource File:
Electronic Resource File\Criterion_C.

b) Staff office space

See faculty office space narrative. In addition, about half of the School's staff are included in the space of the new Hans Rosling Center for Population Health. The remainder are spread amongst the consolidated locations.

c) Classrooms

The School does not manage any classrooms directly. Instead, the School uses classrooms in the Magnuson Health Sciences complex (Health Sciences), as well as across the Seattle campus. The Hans Rosling Center for Population Health includes three active learning classrooms: two 56-person classrooms, plus one 84-person classroom. These classrooms will be managed through UW Health Sciences Administration, but in a way that will provide the School with some priority for their use. Larger classrooms (75-person+), especially active learning classrooms, are currently at a premium across the Seattle campus and within Health Sciences. In the summer of 2020, the UW broke ground on a new Health Sciences Education Building ([HSEB](#)). The HSEB will provide a physical space for interdisciplinary training across all six health sciences schools at the UW. The HSEB is scheduled to bring an additional six medium and three large classrooms online as of academic year 2023-2024.

d) Shared student space

The Hans Rosling Center for Population Health contains a number of shared student spaces, and will greatly increase the total student space across the School. The School currently maintains dedicated student lounges in Raitt Hall in the center of the UW Seattle campus, which is relatively close to the Hans Rosling Center for Population Health. In addition, each of the departments maintain 1,000 to 2,000 square feet respectively of shared student spaces (including lounges and shared workstations) in other buildings. These spaces vary by department and degree program and are generally configured to meet the changing needs of their students.

e) Laboratories, if applicable to public health degree school offerings

The School's primary wet lab facility is the Roosevelt building, located at the edge of West Campus. Many wet labs not formerly located in Roosevelt will be consolidated into this nearly 40,000 square feet facility after some upgrade work is finished at Roosevelt (spring 2021). Other wet lab facilities for basic science research are located at UW Medicine Harborview, in the South Lake Union area of Seattle, or affiliated institutions within the city. SPH maintains no clinical labs itself, but works through partner units within the University and external allied institutions, including the Fred Hutchinson Cancer Research Center. Clinical and dry lab spaces vary widely and are generally connected to research centers, scattered throughout a number of buildings.

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

Physical space is sufficient for the School. The School previously occupied 375,000 square feet across 20 facilities. With the opening of The Hans Rosling Center for Population Health and subsequent consolidation, the School will occupy 475,000 square feet across a total of 10 facilities. Prior to opening of the Hans Rosling Center, dispersion of facilities was a larger issue for the School than was the total square feet occupied. Ease of collaboration was negatively impacted and daily travel time for individuals moving between facilities was high.

Additional teaching space used by SPH includes Health Sciences and will include the nearby HSEB when it is completed in 2023.

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

Strengths

- The new building (Hans Rosling Center) opened in September 2020 and increased the amount of square footage occupied by the School.
- High-quality research and laboratory space across multiple locations and partner institutions.

Weaknesses

- Widely dispersed locations, increasing travel time and diminishing physical collaboration opportunities.
- Larger active learning classrooms are limited and much of the classroom space available is outdated.

Plans for improvement

- Once the remaining consolidations have been completed by the end of the 2020-21 academic year, it will greatly decrease the "dispersed" physical nature of the School.
- Health Sciences Education Building, opening September 2023, will add additional active learning classrooms and higher-quality instructional space.

C5. Information and Technology Resources

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

a) library resources and support available for students and faculty

[UW Libraries](#) is a network of 25 facilities. Available electronically and via reference services on a 24/7 basis, the UW Libraries system maintains a collection of more than 7 million cataloged volumes and journal articles available for download, with additional items available in traditional formats. The Health Sciences Library is an integral part of the UW Libraries, dedicated to serving the needs of the six health sciences schools, by providing access to databases, journals, textbooks, and other reference materials covering the health sciences.

The UW Library system has a liaison librarian serving SPH its departments: Biostatistics, Environmental and Occupational Health Sciences, Epidemiology (including Maternal and Child Health), Global Health (including Pathobiology), Health Services, and the interdisciplinary programs (Health Administration, Nutritional Sciences, and Public Health-Global Health). There is a separate liaison librarian serving the Public Health Genetics interdisciplinary program.

The UW Libraries also provide a curated set of resources for Environmental Health, Global Health, Health Services, Nutritional Sciences, and Public Health-Global Health. In addition, some students specifically take advantage of the [Odegaard Writing and Research Center](#) for student support. Students also have access to a computing lab in the Health Sciences Library providing access to relevant software for instructional use.

b) student access to hardware and software (including access to specific software or other technology required for instructional schools)

SPH leverages centrally-supported hardware and software resources. UW Information Technology (UW-IT) provides central information and technology resources such as classroom technology, instructional technology, server and data center resources, email, calendaring, collaborative technology, large poster and slide printing, and networking. Specific examples include:

- Microsoft Office 365 (cloud-based email, calendaring, and collaboration software)
- Google G Suite (cloud-based email, calendaring, and collaboration software)
- Active learning spaces
- Classroom projectors
- Classroom screens
- Canvas (internal UW system for course information management and discussion boards)
- Zoom (video conferencing, meeting, and webinar software)

Many SPH departments use specialty software and/or hardware resources not available from UW-IT. In addition to making use of UW Libraries and UW-IT resources, these units acquire and support the additional needed resources:

- Biostatistics provides computational resources, including the R and python programming languages and cluster computing hardware and software for students and faculty to support instructional, thesis, and dissertation computing.
- Environmental and Occupational Health provides R, python, and SQL software running on departmental equipment for instructional and research support. All users have access to suitable computing hardware and software. Students have access to two departmental computing labs and servers.

- Health Services provides resources to support instructional and research activities, including equipment (such as laptops) available to instructors to use in instructional programs, and a computer cluster for research, including PhD research. Health Services also supports the distance learning technology needed for its Online MPH degree.
- Global Health provides resources to support instructional and research activities, including equipment (laptops and audio-visual support) available to instructors to use in instructional programs and a student computer lab. Global Health also supports the distance learning technology for its courses that are either partially or fully online.

c) faculty access to hardware and software (including access to specific software or other technology required for instructional schools)

Faculty have access to the same resources as students, including UW-IT resources and departmental resources. In addition, they have access to additional UW-IT resources for instructional support which include Canvas (instructional software), Panapto (lecture recording software), and PollEverywhere (live interactive audience participation software).

d) technical assistance available for students and faculty

Faculty and students have access to technical support from UW-IT for centrally-provided resources, including classroom technology. In addition, SPH departments maintain additional local support staff to provide technical assistance to their faculty and students.

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

The information and technology resources available to students and faculty in SPH are generally sufficient to fulfill its stated mission and goals, and to support its instructional programs. In March 2020, within the space of a week in response to State lockdown orders due to the COVID-19 pandemic, the School was able to move its full workforce to working remotely and to move all courses to online instruction. This sudden change was not without adjustments and minor disruptions, but was entirely possible because of existing IT infrastructure in place at the time, that was already supporting the School's operations and instruction.

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

Strengths

- Reasonable access to, and support for, educational hardware and software for instruction.
- Willing and adaptive faculty. The School, along with the rest of the UW (all three campuses), was able, with one week's notice, to shift to full online delivery of instruction for Spring Quarter 2020.

Weaknesses

- Dependence on a mix of UW-IT infrastructure and locally supported technology, which leads to slightly uneven technological implementation and capabilities across the School.
- Ad hoc approach to online education/technology at the University level, leads to uneven implementations.

Plans for improvement

- SPH's online delivery options are being reviewed during the 2020 calendar year.
- Consolidation of SPH physical locations in the 2020-21 academic year will provide an opportunity to consolidate or streamline technological implementation across the School.

Criterion D

D1. MPH Foundational Public Health Knowledge

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

State-supported programs

Template applies to all state-supported MPH degrees (13 total):

▪ Environmental and Occupational Health	▪ Global Health: General
▪ Environmental and Occupational Health: Occupational Medicine Residency	▪ Global Health: Health Metrics and Evaluation
▪ Environmental and Occupational Health: One Health	▪ Health Services: General
▪ Epidemiology: General	▪ Health Services: Health Systems and Policy
▪ Epidemiology: Global Health	▪ Health Services: Social and Behavioral Sciences
▪ Epidemiology: Maternal and Child Health	▪ Public Health Genetics
	▪ Public Health Nutrition

A matrix that indicates the required learning experiences that provide exposure to each of the required learning objectives identified in D1 (1-12). The matrix must identify all options for MPH students used by the school.

Content Coverage for MPH

Content	Course number(s) & name(s) or other educational requirements
1. Explain public health history, philosophy and values	PHI 511: Foundations of Public Health
2. Identify the core functions of public health and the 10 Essential Services*	PHI 511: Foundations of Public Health
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PHI 512: Analytic Skills for Public Health I PHI 513: Analytic Skills for Public Health II
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	PHI 511: Foundations of Public Health
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PHI 511: Foundations of Public Health

Content	Course number(s) & name(s) or other educational requirements
6. Explain the critical importance of evidence in advancing public health knowledge	PHI 512: Analytic Skills for Public Health I PHI 513: Analytic Skills for Public Health II
7. Explain effects of environmental factors on a population's health	PHI 511: Foundations of Public Health
8. Explain biological and genetic factors that affect a population's health	PHI 511: Foundations of Public Health
9. Explain behavioral and psychological factors that affect a population's health	PHI 511: Foundations of Public Health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	PHI 511: Foundations of Public Health
11. Explain how globalization affects global burdens of disease	PHI 511: Foundations of Public Health
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	PHI 514: Determinants of Health

State-supported MPH degrees	Links to curriculum pages
Environmental and Occupational Health	https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MPH_EOH_fromAUT20_20-04-17.pdf
Environmental and Occupational Health: Occupational Medicine Residency	https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MPH_OEM_fromAUT20_20-04-17.pdf
Environmental and Occupational Health: One Health	https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MPH_OH_fromAUT20_20-04-17.pdf
Epidemiology: General	https://epi.washington.edu/master-public-health-mph
Epidemiology: Global Health	
Epidemiology: Maternal and Child Health	
Global Health:	https://globalhealth.washington.edu/education-training/master-public-health/curriculum
Global Health: Health Metrics and Evaluation	
Health Services:	http://depts.washington.edu/hservmph/courses
Health Services: Health Systems and Policy	http://depts.washington.edu/hservmph/hsp
Health Services: Social and Behavioral Sciences	http://depts.washington.edu/hservmph/sbs
Public Health Genetics	http://iphg.biostat.washington.edu/programs/mph
Public Health Nutrition	https://nutr.uw.edu/graduate/mph/curriculum/

Fee-Based Programs

Content Coverage for MPH:	Health Services: Community-Oriented Public Health Practice
Content	Course number(s) & name(s) or other educational requirements
1. Explain public health history, philosophy and values	HSERV 531: COPHP Population Health and Community Development (first block, case 0)
2. Identify the core functions of public health and the 10 Essential Services*	HSERV 531: COPHP Population Health and Community Development (first block, case 1)
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	HSERV 533: COPHP Quantitative Methods HSERV 538: COPHP Evaluation Design and Community Organizing
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HSERV 531: COPHP Population Health and Community Development (first block, case 1)
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health (first block, case 1)
6. Explain the critical importance of evidence in advancing public health knowledge	HSERV 533: COPHP Quantitative Methods
7. Explain effects of environmental factors on a population's health	HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health (first block, case 1)
8. Explain biological and genetic factors that affect a population's health	HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health (first block, case 1)
9. Explain behavioral and psychological factors that affect a population's health	HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health (first block, case 1)
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	HSERV 531: COPHP Population Health and Community Development
11. Explain how globalization affects global burdens of disease	HSERV 537: COPHP Health Policy (sase 1)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health (second block, case 1)

Link to curriculum page: <https://www.mphpublichealthpractice.uw.edu/academic-experience/courses/>

Content Coverage for MPH:	Online Master of Public Health
Content	Course number(s) & name(s) or other educational requirements
1. Explain public health history, philosophy and values	HSERV 516: Introduction to Health Services
2. Identify the core functions of public health and the 10 Essential Services*	HSERV 516: Introduction to Health Services
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	EPI 511: Introduction to Epidemiology (quantitative) HSERV 517: Qualitative Research Methods: An Introduction (qualitative)
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HSERV 514: Social Determinants of Population Health and Health Disparities
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSERV 504: Health Promotion and Behavior Change Communication
6. Explain the critical importance of evidence in advancing public health knowledge	EPI 511: Introduction to Epidemiology
7. Explain effects of environmental factors on a population's health	ENV H 512: Environmental and Occupational Health for Public Health Practitioners
8. Explain biological and genetic factors that affect a population's health	HSERV 514: Social Determinants of Population Health and Health Disparities
9. Explain behavioral and psychological factors that affect a population's health	HSERV 514: Social Determinants of Population Health and Health Disparities
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	HSERV 514: Social Determinants of Population Health and Health Disparities
11. Explain how globalization affects global burdens of disease	HSERV 514: Social Determinants of Population Health and Health Disparities
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	ENV H 512: Environmental and Occupational Health for Public Health Practitioners

Link to curriculum page: <https://www.executivemph.uw.edu/program-overview/courses-curriculum/#Curriculum>

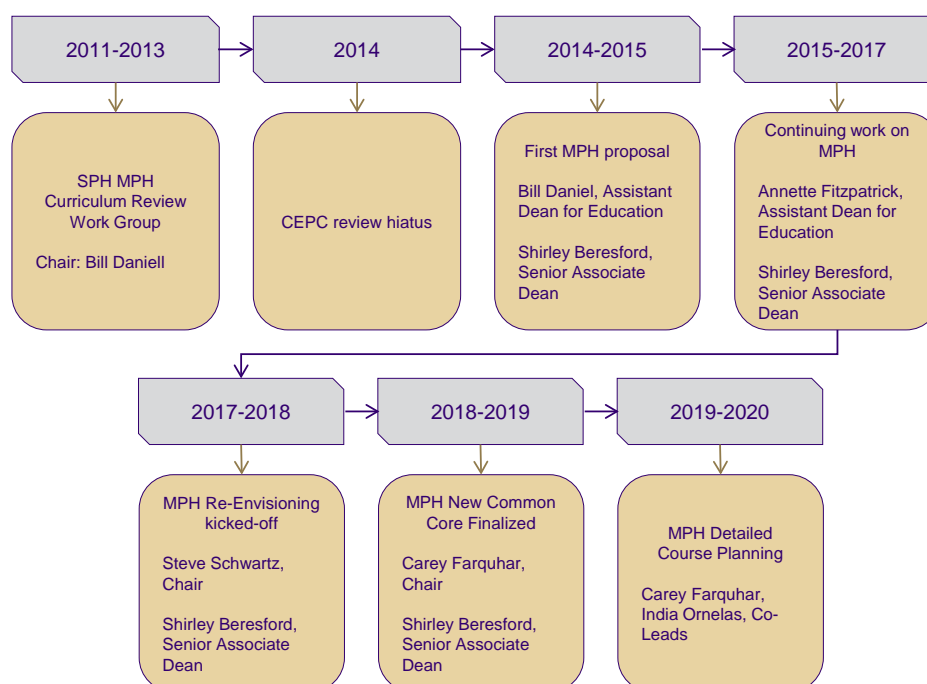
- 2) Document the methods described above. This documentation must include all referenced syllabi, samples of tests or other assessments and web links or handbook excerpts that describe admissions prerequisites, as applicable.

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\D1.2.

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

Strengths

- The SPH has engaged in several rounds of re-envisioning the Common Core MPH curriculum since 2011, initially motivated by the School's 2012-2020 Strategic Plan. As mentioned in Criterion B, the objectives were to improve the skill sets of graduates to be a better fit with local and state health departments seeking to hire them. Graduates have always received rigorous training in methods of public health research, but SPH heard from graduates and employers that they needed more development around teamwork, communication, leadership, and other practical skills necessary for success in practice environments. The goal in re-envisioning the MPH, articulated in the Plan, was to ensure graduates have the skills and practical competencies necessary to be productive, effective, and transformational public health leaders, scientists, and practitioners. This goal was reinforced by the Association of Schools and Programs of Public Health (ASPPH) discussions and the CEPH published competencies, revised in 2016. The result of many years of focused work on transforming the MPH was to create a wholly new Common Core, to be taken by all MPH graduate students at the same time. The individual MPH degree programs for all state-supported MPH students, all have this integrated Common Core providing a strong foundational public health knowledge base. Beginning with Autumn Quarter 2020, the Common Core will prepare incoming MPH students (in the state-supported degrees) with the knowledge and skills consistent with the SPH mission to prepare graduates for successful careers in either public health practice or public health research. One additional strength is the creation of a more cohesive, structured, and active learning environment within the Common Core. The illustration below shows the timeline of this work.



D2. MPH Foundational Competencies

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

State-supported programs

Environmental and Occupational Health Sciences Department		
Requirements for MPH degree, Environmental and Occupational Health		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
ENV H 599	Field Studies	3
ENV H 501	Foundations of Environmental and Occupational Health	4
ENV H 502	Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
ENV H 503	Adverse Health Effects of Environmental and Occupational Toxicants	4
ENV H 543 ENV H 572 ENV H 577	Quantitative Microbial Risk Assessment, or, Environmental Risk and Society, or, Risk Assessment for Environmental Health Hazards	3-4
ENV H 580	Environmental and Occupational Health Sciences Seminar	3
ENV H 583	Thesis Research Proposal Preparation	1
ENV H 700	Master's thesis	9
	Three learning emphasis courses	9
	160 hours completing practicum	

Requirements for MPH degree, Environmental & Occupational Health: Occupational Medicine Residency		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
ENV H 599	Field Studies	3
ENV H 501	Foundations of Environmental and Occupational Health	4
ENV H 502	Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
ENV H 503	Adverse Health Effects of Environmental and Occupational Toxicants	4
ENV H 580	Environmental and Occupational Health Sciences Seminar	2
ENV H 583	Thesis Research Proposal Preparation	1
EPI 513	Epidemiology Methods II	4
BIOST 512	Medical Biometry II	4
BIOST 513 ENV H 596	Medical Biometry III, or, Current issues in Environmental and Occupational Medicine	4
ENV H 550	Occupational and Environmental Disease	4
ENV H 564	Recognition of Health and Safety Problems in Industry	4
ENV H 596	Current issues in Environmental and Occupational Medicine	2
ENV H 597	Case Studies in Environmental and Occupational Health	2
ENV H 700	Master's thesis	9
	160 hours completing practicum	

Requirements for MPH degree, Environmental & Occupational Health: One Health		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
ENV H 599	Field Studies	3
ENV H 501	Foundations of Environmental and Occupational Health	4
ENV H 502	Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
ENV H 503	Adverse Health Effects of Environmental and Occupational Toxicants	4
ENV H 580	Environmental and Occupational Health Sciences Seminar	3
ENV H 583	Thesis Research Proposal Preparation	1
EPI 513	Epidemiology Methods II	4
BIOST 512	Medical Biometry II	4
BIOST 513	Medical Biometry III	4
ENV H 539	One Health: Human and Animal Health in a Changing Environment	3
ENV H 586	Current Issues in Occupational Health at the Human Animal Interface	6
ENV H 700	Master's thesis	9
	Electives to complete minimum credits	
	160 hours completing practicum	

Epidemiology Department		
Requirements for MPH degree, Epidemiology: General		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
EPI 513	Epidemiologic Methods II	4
EPI 510	Epidemiologic Data Analysis	3
BIOST 512	Medical Biometry II	4
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
EPI 514	Application of Epidemiologic Methods	5
BIOST 513	Medical Biometry III	4
EPI 583	Epidemiology Seminar	3
EPI 595	Epidemiology Master's Practicum	4-6
EPI 700	Master's Thesis	9-18
	credits minimum of EPI elective courses	3
	credits of additional electives	2
	160 hours completing practicum	

Requirements for MPH degree, Epidemiology: Global Health		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
GH 511	Problems in Global Health	3
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
EPI 513	Epidemiologic Methods II	4
EPI 510	Epidemiologic Data Analysis	3
BIOST 512	Medical Biometry II	4
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
EPI 514	Application of Epidemiology Methods	5
BIOST 513	Medical Biometry III	4
EPI 583	Epidemiology Seminar	3
EPI 595	Epidemiology Master's Practicum	4-6
EPI 700	Master's Thesis	9-18
	GH electives	2 minimum
	160 hours completing practicum	
Requirements for MPH degree, Epidemiology: Maternal and Child Health		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
EPI 592	Program Seminars	2
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
EPI 513	Epidemiologic Methods II	4
EPI 510	Epidemiologic Data Analysis	3
BIOST 512	Medical Biometry II	4
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
EPI 514	Application of Epidemiologic Methods	5
BIOST 513	Medical Biometry III	4
EPI 521	Epidemiology of Maternal and Child Health Problems	3
EPI 583	Epidemiology Seminar	3
EPI 595	Epidemiology Master's Practicum	4-6
EPI 700	Master's Thesis	9-18
	160 hours completing practicum	

Global Health Department		
Requirements for MPH degree, Global Health: General		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
G H 595	Master's Practicum	4-6
G H 700	Master's Thesis	9 minimum
G H 511	Problems in Global Health	4
G H 593	MPH Workshop	3
G H 531 G H 532	Research and Evaluation Methods in Global Health, or, Responsible Conduct of Research: Global and Local	3
	Electives	3+
	160 hours completing practicum	
Requirements for MPH degree, Global Health: Health Metrics and Evaluation		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
G H 595	Master's Practicum	4-6
G H 700	Master's Thesis	9 min
GH 511	Problems in Global Health	4
G H 592	Program Seminars	3
G H 590A G H 590G	<i>Selected Topics in Global Health:</i> Mortality Analysis for Global Health, or, Global Burden of Disease	3
G H 539	Methods, Tools, and Data for Global Health	2
	160 hours completing practicum	

Health Services Department		
Requirements for MPH degree, Health Services: General		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
HSERV 592	Program Seminars	2
HSERV 595	Practicum/Field Work in Community Medicine	4
HSERV 700	Master's Thesis	9
	HSERV elective credits	10 min
	160 hours completing practicum	
Requirements for MPH degree, Health Services: Health Systems and Policy		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
HSERV 592	Program Seminars	2
HSERV 595	Practicum/Field Work in Community Medicine	4
HSERV 700	Master's Thesis, or,	9
HSERV 599	Capstone Project	
HSERV 512	Health Systems and Policy	3
HSERV 513	Health Policy Research	3
HSMGMT 514	Social Determinants of Population Health and Health Disparities	3
HSERV 552	Health Policy Development	3
	160 hours completing practicum	

Requirements for MPH degree, Health Services: Social and Behavioral Sciences		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
HSERV 592	Program Seminars	2
HSERV 595	Practicum/Field Work in Community Medicine	4
HSERV 700	Master's Thesis	9
HSERV 581	Strategies of Health Promotion	4
HSERV 522	Health Program Evaluation	4
HSERV 507	Health Communication and Marketing for Health Promotion: Theory and Practice	3
	Advanced Qualitative Methods	4-5
	160 hours completing practicum	

Nutritional Sciences Program		
Requirements for MPH degree, Public Health Nutrition (capstone option)		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
NUTR 500	Food Systems, Nutrition, and Health Seminar	1
NUTR 512	United States Food Systems Policy	3
NUTR 513	Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	2
NUTR 520	Nutrition and Metabolism I	4
NUTR 521	Nutrition and Metabolism II	4
NUTR 526	Maternal and Pediatric Nutrition	4
NUTR 531	Public Health Nutrition	3
NUTR 562	Nutrition and Chronic Disease	4
NUTR 532	Fieldwork in Public Health Nutrition	1
NUTR 595	Nutritional Sciences Master's Practicum	6
NUTR 596	Nutrition Practice Capstone	4
	Electives	5
	160 hours completing practicum	

Requirements for MPH degree, Public Health Nutrition (thesis option)		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
NUTR 500	Food Systems, Nutrition, and Health Seminar	1
NUTR 512	United States Food Systems Policy	3
NUTR 513	Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	2
NUTR 520	Nutrition and Metabolism I	4
NUTR 521	Nutrition and Metabolism II	4
NUTR 526	Maternal and Pediatric Nutrition	4
NUTR 531	Public Health Nutrition	3
NUTR 562	Nutrition and Chronic Disease	4
NUTR 532	Fieldwork in Public Health Nutrition	1
NUTR 595	Nutritional Sciences Master's Practicum	6
NUTR 700	Master's Thesis	9
NUTR 531	Public Health Nutrition	3
	160 hours completing practicum	

Public Health Genetics Program		
Requirements for MPH degree, Public Health Genetics		
Course number	Course name*	Credits (if applicable)
PHI 511	Foundations of Public Health	3
PHI 512	Analytic Skills for Public Health I	7
PHI 513	Analytic Skills for Public Health II	3
PHI 514	Determinants of Health	3
PHI 515	Implementing Public Health Interventions	4
PHI 516	Public Health Practice	3
PHG 511	Genetic Epidemiology	3
PHG 512	Legal, Ethical, and Social Issues in Public Health Genetics	3
PHG 513	Basic Concepts in Pharmacogenetics and Toxicogenomics	3
PHG 523	Genetics and the Law	3
PHG 527	Social Science Research Methods	3
PHG 580	Interactive Seminar	6
PHG 595	Master's Practicum	4
PHG 700	Master's Thesis	9
	160 hours completing practicum	

Fee-based programs

Health Services Department		
Requirements for MPH degree, Health Services: Community-Oriented Public Health Practice		
Course number	Course name*	Credits (if applicable)
HSERV 531	COPHP Population Health and Community Development	6
HSERV 533	COPHP Quantitative Methods	6
HSERV 534	COPHP Health Behavior and Health Promotion and Environmental Health	6
HSERV 537	COPHP Health Policy	6
HSERV 538	COPHP Evaluation Design and Community Organizing	6
HSERV 540	COPHP Management and Leadership	6
	electives	6
	seminar	6
	practicum	6
	capstone	9
	160 hours completing practicum	
Requirements for MPH degree, Online Master of Public Health		
Course number	Course name*	Credits (if applicable)
EPI 511	Introduction to Epidemiology	4
HSERV 514	Social Determinants of Population Health and Health Disparities	3
HSERV 516	Introduction to Health Services	4
BIOST 502	Introduction to Statistics in Health Sciences	4
ENV H 512	Environmental & Occupational Health for Public Health Practitioners	3
HSERV 504	Health Promotion & Behavior Change Communication	3
BIOST 503	Applications of Statistics to Health Sciences	3
HSERV 522	Health Program Evaluation	4
HSMGMT 560	Management Practice in Healthcare and Public Health Organizations	3
HSERV 517	Qualitative Research Methods: An Introduction	3
HSERV 520	Methods in Applied Community Research	2
GH 511	Problems in Global Health	3
HSERV 559	Public Policy and the Public's Health	3
HSERV 595	Practicum/Field Work in Community Medicine	3
HSERV 700	Master's Thesis, or,	9
HSERV 598	Executive Master of Public Health Capstone	
HSERV 567	Strategic Leadership of Public Health Systems	5
HSMGMT 572	Financial Management for Health Professionals	3
	160 hours completing practicum	

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

State-supported programs

Template applies to all state-supported MPH degrees (13 total):		
	▪ Environmental and Occupational Health	▪ Global Health: General
	▪ Environmental and Occupational Health: Occupational Medicine Residency	▪ Global Health: Health Metrics and Evaluation
	▪ Environmental and Occupational Health: One Health	▪ Health Services: General
	▪ Epidemiology: General	▪ Health Services: Health Systems and Policy
	▪ Epidemiology: Global Health	▪ Health Services: Social and Behavioral Sciences
	▪ Epidemiology: Maternal and Child Health	▪ Public Health Genetics
		▪ Public Health Nutrition
Assessment of Competencies for MPH		
Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
Evidence-based Approaches to Public Health		
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	PHI 512: Analytic Skills for Public Health I □ PHI 513: Analytic Skills for Public Health II □ PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 512: Analytic Skills for Public Health I □ <u>Didactic Opportunity:</u> Weeks 1-6. Lecture and readings from required text: Epidemiology (5th Ed.) Gordis L. Chapters 1, 3, 4, 7-14. Epidemiologic Methods: Studying the Occurrence of Illness. 2nd Edition. Weiss NS and Koepsell TD. Chapters 1-5, 7-9 18. □ <u>Assessment Opportunity:</u> Week 6. Midterm with short answer questions asking students to select and outline multiple epidemiologic study or analytic designs to address specific scientific questions relevant to the breadth of settings and situations in public health practice, and short answer questions on selecting and calculating appropriate measures of disease prevalence and incidence. □ <u>Didactic Opportunity:</u> Weeks 7-10. Lecture and readings from required text: Epidemiology (5th Ed.) Gordis L. Chapters 5, 10, 13 18. Epidemiologic Methods: Studying the Occurrence of Illness. 2nd Edition. Weiss NS and Koepsell TD. Chapters 10, 11 19. □ <u>Assessment Opportunity:</u> Week 11. Final with short answer questions on identifying sources of confounding and calculating measures of excess risk adjusted for and stratified by a confounding factor, and short answer questions on sources of bias in exposure-outcome relationships in the context of different public health practice settings and situations.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
2a. Select quantitative data collection methods appropriate for a given public health context	PHI 512: Analytic Skills for Public Health I □ PHI 513: Analytic Skills for Public Health II □ PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 512: Analytic Skills for Public Health I <u>Didactic Opportunity:</u> Week 9. Lecture and readings from required text: Epidemiology (5th Ed.) Gordis L. Chapters 5, 18. Epidemiologic Methods: Studying the Occurrence of Illness. 2nd Edition. Weiss NS and Koepsell TD. Chapters 10, 19. <u>Assessment Opportunity:</u> Week 9. In homework assignments, students select and describe quantitative data collection strategies and methods relevant to multiple public health contexts. <u>Assessment Opportunity:</u> Week 9. During the course lab, students design and conduct a data collection approach to measure real-world exposures relevant to public health, and submit this as an individual assignment.
2b. Select qualitative data collection methods appropriate for a given public health context	PHI 513: Analytic Skills for Public Health II □ PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 513: Analytic Skills for Public Health II □ <u>Didactic Opportunity:</u> Week 2. Lecture and required reading: Tolley EE, Ulin PR, Mack N, Robinson ET, Succop SM. Qualitative Methods in Public Health: A Field Guide for Applied Research (2nd). John Wiley & Sons; 2016. Appendix 4. In-class activity to select most appropriate qualitative method. □ <u>Assessment Opportunity:</u> Week 3. In homework 2, students analyze three public health cases and select the qualitative data collection methods most appropriate for addressing each. In the quiz, students must identify strengths/weaknesses of different qualitative methods/sampling based on research questions and context. For the final project, students must select qualitative methods for additional data collection strategies to make the study more robust.
3a. Analyze quantitative data using biostatistics, informatics, computer-based programming and software, as appropriate	PHI 512: Analytic Skills for Public Health I □ PHI 513: Analytic Skills for Public Health II □	PHI 512: Analytic Skills for Public Health I □ <u>Didactic Opportunity:</u> Week 1-10. Lectures and course lab focused on selection and application of biostatistical and informatics approaches. <u>Assessment Opportunity:</u> Week 10. In the Final Data Analysis Project, students will use statistical software to apply informatics approaches and methods to merge two data sets, clean and recode data, and conduct statistical summaries of relevant variables and analyses of exposure outcome relationships to address a scientific question of public health relevance.
3b. Analyze qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	PHI 513: Analytic Skills for Public Health II	PHI 513: Analytic Skills for Public Health II □ <u>Didactic Opportunity:</u> Week 5. Lecture and required readings: Salmona M, Lieber E, Kaczynski D. Qualitative and Mixed Methods Data Analysis Using Dedoose. Chapter 6. SAGE Publications, 2020. Weitzman, E. 2000. Chapter 30: Software and Qualitative Research. In: Handbook of Qualitative Research, Second Edition. Denzin, NK and Lincoln, YS (editors). Sage Publications. Thousand Oaks, CA. (pp. 780-782). □ <u>Assessment Opportunity:</u> Week 4. In homework assignment 3, students analyze a qualitative transcript using Dedoose software, applying codes, comments and memos. In the final project, students use Dedoose or Word to analyze focus group and interview transcripts from a specific case study.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
4. Interpret results of data analysis for public health research, policy or practice	PHI 512: Analytic Skills for Public Health I <input type="checkbox"/> PHI 513: Analytic Skills for Public Health II <input type="checkbox"/> PHI 514: Determinants of Health <input type="checkbox"/> PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice <input type="checkbox"/>	PHI 514: Determinants of Health <u>Didactic Opportunity:</u> Weeks 4, 5, 6, 8. Lectures, readings, and group activities. <u>Assessment Opportunity:</u> Week 6, in an assignment to develop a policy brief, students select articles, summarize, and critically assess methods and findings, and interpret the results to inform their policy and practice recommendations. In weeks 2, 5, 7, 9, students will summarize and apply knowledge learned in each respective module through individual online quizzes, including interpreting research findings from module articles.
Public Health & Health Care Systems		
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings	PHI 511: Foundations of Public Health <input type="checkbox"/> PHI 516: Public Health Practice	PHI 511: Foundations of Public Health <input type="checkbox"/> <u>Didactic Opportunity:</u> Week 4. Lecture and readings from required texts: Bodenheimer, T. S., & Grumbach, K. (2020). Understanding health policy: A clinical approach. 8th edition. New York. Chapter 12. Birn, A. E., Pillay, Y., & Holtz, T. H. (2017). Textbook of global health. Oxford University Press. Chapter 11 <input type="checkbox"/> <u>Assessment Opportunity:</u> Week 7. A short answer quiz at the end of Module 2: Healthcare Systems and Delivery in the US and Globally, asks students to compare and contrast different models for the organization, structure and function of healthcare, public health, and regulatory systems that are encountered in the U.S. and internationally.
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 societal levels	PHI 511: Foundations of Public Health <input type="checkbox"/> PHI 514: Determinants of Health <input type="checkbox"/> PHI 516: Public Health Practice	PHI 514: Determinants of Health <u>Didactic Opportunity:</u> Week 3, 5, 8, 10. Lecture, readings, and group discussions. <u>Assessment Opportunity:</u> Week 3, 5, 8, 10. In a group assignment, students identify a form of bias (racism or other form of structural bias, or social inequity), define the bias conceptually and operationally, and discuss evidence quantifying relationships between exposure to the bias and adverse selected health outcomes in a class presentation of the case study. Students develop a conceptual logic model that demonstrates the connections between the bias identified and the health outcomes. Students identify three challenges (organizational, community, societal levels) to achieve health equity regarding the selected outcome. The presentations will include the model and discuss the challenges associated with the outcome. Students will be evaluated for individual contribution through peer-to-peer review. Each student will be randomly assigned to a group and will present once throughout the quarter in weeks 3, 5, 8, or 10.
Planning & Management to Promote Health		
7. Assess population needs, assets and capacities that affect communities' health	PHI 513: Analytic Skills for Public Health II <input type="checkbox"/> PHI 514: Determinants of Health <input type="checkbox"/> PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice	PHI 515: Implementing Public Health Interventions <u>Didactic Opportunity:</u> Week 1, Lecture and readings from required text: Planning, Implementing, & Evaluating Health Promotion Programs: A Primer (7th Edition) 7th Ed James F. McKenzie (Author), Brad L. Neiger, Rosemary Thackeray, Chapters 2, 3, 4. <u>Assessment Opportunity:</u> Week 3. In an individual homework assignment, students identify a data source or research publication related to an assigned case study, which informs the assessment of needs, assets, and capacities. In a brief paper, students describe the information and analyze how it affects communities' health.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	PHI 513: Analytic Skills for Public Health II <input type="checkbox"/> PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice	PHI 515: Implementing Public Health Interventions <u>Didactic Opportunity:</u> Weeks 2-3. Lecture and readings from required text: Planning, Implementing, & Evaluating Health Promotion Programs: A Primer (7th Edition) 7th Ed James F. McKenzie (Author), Brad L. Neiger, Rosemary Thackeray, Chapters 6, 8, 9. <u>Assessment Opportunity:</u> Week 3. In an individual homework assignment, students analyze and discuss how cultural values and practices influence program design and implementation in a brief paper for an assigned case study.
9. Design a population-based policy, program, project or intervention	PHI 513: Analytic Skills for Public Health II <input type="checkbox"/> PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice	PHI 515: Implementing Public Health Interventions <u>Didactic Opportunity:</u> Week 3. Lecture and readings from required text: Planning, Implementing, & Evaluating Health Promotion Programs: A Primer (7th Edition) 7th Ed James F. McKenzie (Author), Brad L. Neiger, Rosemary Thackeray, Chapters 6, 7, 8. <u>Assessment Opportunity:</u> Week 3. In an individual homework assignment, students design a program or policy in a brief paper for an assigned case study.
10. Explain basic principles and tools of budget and resource management	PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice	PHI 515: Implementing Public Health Interventions <u>Didactic Opportunity:</u> Week 6. Lecture and readings from required text: Planning, Implementing, & Evaluating Health Promotion Programs: A Primer (7th Edition) 7th Ed James F. McKenzie (Author), Brad L. Neiger, Rosemary Thackeray, Chapter 10. <u>Assessment Opportunity:</u> Week 6. In-class short answer quiz asks students to identify and describe basic budgeting principles and tools for program implementation, resource, and budget management.
11. Select methods to evaluate public health programs	PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice	PHI 515: Implementing Public Health Interventions <u>Didactic Opportunity:</u> Weeks 8-9. Lecture and readings from required text: Planning, Implementing, & Evaluating Health Promotion Programs: A Primer (7th Edition) 7th Ed James F. McKenzie (Author), Brad L. Neiger, Rosemary Thackeray, Chapters 13-14. <u>Assessment Opportunity:</u> Week 9. In-class short answer quiz asks students to select process and outcome evaluation methods for public health programs.
Policy in Public Health		
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence	PHI 511: Foundations of Public Health <input type="checkbox"/> PHI 513: Analytic Skills for Public Health II <input type="checkbox"/> PHI 514: Determinants of Health <input type="checkbox"/> PHI 515: Implementing Public Health Interventions <input type="checkbox"/> PHI 516: Public Health Practice	PHI 515: Implementing Public Health Interventions <u>Didactic Opportunity:</u> Week 5. Lecture and reading on policy-making process. <u>Assessment Opportunity:</u> Week 5. In an individual in-class exercise on policy-level interventions and different dimensions of the policy-making process for an assigned case study, including a discussion of ethical issues and use of evidence. Students submit the exercise for evaluation.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	PHI 511: Foundations of Public Health□ PHI 515: Implementing Public Health Interventions□ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity:</u> Week 5 sessions ("Health needs assessment" and "Public health programs/policies") and week 6 session ("Policymaker engagement"). <u>Assessment Opportunity:</u> Week 6. 1. In a homework assignment, students describe one example of stakeholder engagement and coalition building (from literature) and propose strategies for how the process can apply to a specific public health problem, such as COVID-19 related PPE shortages. 2. In a group assignment, students will develop a plan that includes strategies to identify, engage, and solicit input from key stakeholders in the development of an essential worker protection policy for COVID-19.
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations	PHI 511: Foundations of Public Health□ PHI 515: Implementing Public Health Interventions□ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity:</u> Week 5 session ("Public health programs/policies"), week 6 sessions ("Policymaker engagement" and "Program monitoring and evaluation"), and week 7 session ("Workforce health and safety"). <u>Assessment Opportunity:</u> Week 7. 1. Students summarize one COVID-19 related essential worker protection policy implemented in a U.S. state and describe how it affects diverse populations within the state/jurisdiction. 2. In groups, evaluate each group member's policy example and develop a proposed essential worker protection policy for the group's target workforce sector for the diverse populations in the group's target jurisdiction. The group's work is submitted and individual students are assessed for their contributions.
15. Evaluate policies for their impact on public health and health equity	PHI 513: Analytic Skills for Public Health II□ PHI 514: Determinants of Health□ PHI 515: Implementing Public Health Interventions□ PHI 516: Public Health Practice	PHI 514: Determinants of Health <u>Didactic Opportunity:</u> Week 4, 5, 10. Lecture, readings, and group activities. <u>Assessment Opportunity:</u> Week 6. In a homework assignment, students analyze how structural bias, social inequities, and racism facilitate policy enactment and evaluate how that policy impacts selected health outcome for a particular historically marginalized group in the U.S. Students will also meet and discuss the collection of policies identified, their roots in structural bias, social inequities, and racism, and how these impact a selected health outcome.
Leadership		
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	PHI 511: Foundations of Public Health□ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity:</u> Week 2 sessions ("Group dynamics: dialogue skills part 1 and 2"). and week 3 ("Leading teams" and "Leading change"). <u>Assessment Opportunity:</u> Week 3. Each student will take a leadership style assessment (Harvard Business Review https://hbr.org/2015/06/assessment-whats-your-leadership-style). As part of a group assignment, each group member will share leadership style assessment results and discuss how they may affect group dynamics; the group will apply leadership, management, and governance principles to create a shared vision for the group's work moving forward throughout the quarter. Groups will establish a facilitator schedule. The lead facilitator will rotate throughout the quarter allowing each student to practice leadership, facilitation, and negotiation skills in a group setting. Peers will provide feedback after each session about the tools the facilitator used to facilitate the group discussion.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
17. Apply negotiation and mediation skills to address organizational or community challenges	PHI 511: Foundations of Public Health □ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity</u> : Week 3 session ("Leading teams" and "Leading change"), week 4 session ("Public health surveillance"), week 5 session ("Health needs assessment"). <u>Assessment Opportunity</u> : Week 5. As an individual homework assignment, students create a list of anticipated barriers to collecting local surveillance data during an active outbreak event. In groups, develop a strategy to respond to each individual's anticipated barriers, applying principles of negotiation and mediation. The group's strategy is submitted for evaluation and individual students are assessed for their contributions.
Communication		
18. Select communication strategies for different audiences and sectors	PHI 513: Analytic Skills for Public Health II □ PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity</u> : Week 8 sessions ("Communication strategies: identifying and understanding stakeholders"), and ("Community engagement"). <u>Assessment Opportunity</u> : Week 9. As an individual assignment, each student will create an elevator pitch about climate change and human health for a specific audience, choose the appropriate communication medium for that audience and create audience-appropriate messaging. In groups, compare and contrast messages and modes of communication used for different audiences. As an individual homework assignment, write an individual reflection synthesizing the group discussion and describe how cultural considerations were addressed, across audiences.
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	PHI 513: Analytic Skills for Public Health II □ PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity</u> : Week 8 sessions ("Communication strategies: identifying and understanding stakeholders"), ("Community engagement"), and week 9 sessions ("Communication strategies: honing the message" and "Media strategies"). <u>Assessment Opportunity</u> : Week 9, 10. As an individual assignment, each student will create an elevator pitch about climate change and human health for a specific audience, choose the appropriate communication medium for that audience, and create audience-appropriate messaging (week 9). Each student orally presents his/her climate change elevator pitch in a group setting and is evaluated by the instructor (week 10).
20. Describe the importance of cultural competence in communicating public health content	PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 516: Public Health Practice <u>Didactic Opportunity</u> : Week 8 sessions ("Communication strategies: identifying and understanding stakeholders"), ("Community engagement"), and week 9 sessions ("Communication strategies: honing the message" and "Media strategies"). <u>Assessment Opportunity</u> : Week 9. In groups, compare and contrast messages and modes of communication used for different audiences. As an individual homework assignment, write an individual reflection synthesizing the group discussion and describe how cultural considerations were addressed, across audiences.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
Interprofessional Practice		
21. Perform effectively on interprofessional [^] teams	PHI 511: Foundations of Public Health □ PHI 516: Public Health Practice □ UW iPALS	PHI 516: Public Health Practice <u>Didactic Opportunity:</u> Students will have completed an iPALS session earlier in the academic year, and will also hear didactic content in week 1 sessions ("Framing: leading in public health" and "Leading self"), and week 2 sessions ("Group dynamics" parts 1 and 2). <u>Assessment Opportunity:</u> Week 3. Students write a paper describing the experience and group work conducted during the UW iPALS session(s); how they and/or others performed effectively, what was learned, and how they plan to apply these lessons to work with interprofessional teams/individuals going forward in their career.
Systems Thinking		
22. Apply systems thinking tools to a public health issue	PHI 513: Analytic Skills for Public Health II □ PHI 514: Determinants of Health □ PHI 515: Implementing Public Health Interventions □ PHI 516: Public Health Practice	PHI 514: Determinants of Health <u>Didactic Opportunity:</u> Week 1, 3, 4, 5, 6, 7. Lectures, readings, and group activities. <u>Assessment Opportunity:</u> Week 9-10. In a final group paper, students will use a systems thinking approach and tools to analyze a public health problem. Through this assessment, students will practice and demonstrate their ability to apply and analyze complex adaptive system diagrams, label the interactions among system components, and recognize emergent dynamics.

A note about competency D2-21: *Perform effectively on interprofessional teams*. All MPH students are required to attend at least one interactive session during their first year of the UW iPALS. These sessions are provided through the UW Center for Health Sciences Interprofessional Education Research and Practice: <https://collaborate.uw.edu/>. This Center coordinates interprofessional academic learning sessions (iPALS) for the UW schools in health sciences. Since 2019, SPH faculty have co-designed some of the iPALS sessions. Students work together interprofessionally within School of Dentistry, School of Medicine, School of Nursing, School of Public Health, and School of Social Work. An assessment, for SPH MPH students, is then conducted at the end of their first academic year.

Fee-based programs

Assessment of Competencies for MPH: Health Services: Community-Oriented Public Health Practice		
Competency	Course number(s) and name(s)*	Describe specific assessment opportunity"
Evidence-based Approaches to Public Health		
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	HSERV 533: CPHP Quantitative Methods, and the associated seminar, HSERV 592 C: Program Seminars	<p><u>Didactic Opportunity</u>: HSERV 592. Week 2. Faculty present a lecture covering major study designs; in preparation for that lecture, students watch a 50-minute video prepared by the NW Center for Public Health Practice describing the purpose and applications of study designs (case study, case series, case control, cohort, randomized control trial).□</p> <p><u>Assessment Opportunity</u>: HSERV 533. In Week 1 ("Fair Outbreak" case), Week 3 ("To screen or not to screen" case), Week 4 ("Starting Right" case), Week 6-7 ("Walk it Out"), Week 9 ("Lies & Statistics"), Week 10 ("Attachment to the Data"), students complete individual assignments and write research papers on case topics and methods. These are read by fellow students and graded by faculty using a rubric. Each case exposes students to major study designs and analytical methods in a scaffolded way; students design data collection tools, collect and analyze data, and report findings in increasingly complex ways. The final exam asks students to select and describe appropriate study designs based on given scenarios.</p>
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	HSERV 538: CPHP Evaluation Design and Community Organizing	<p>Quantitative</p> <p><u>Didactic Opportunity</u>: Week 1. Students read David Grembowski's, "The Practice of Health Program Evaluation." Chapter 8 on Measurement & Evaluation, Chapter 9 on Data Analysis.</p> <p><u>Assessment Opportunity</u>: Evaluation case: In Week 1, Students are paired with a community-based organization that seeks an evaluation of a program. Students read the text, decide what study design to use, and what quantitative data to collect. Assessments are based on their selection of methods based on their understanding of theory, their implementation of the study design, and their presentation of findings to the client organization. A rubric is provided to students in the syllabus indicating the grading criteria.</p>
		<p>Qualitative</p> <p><u>Didactic Opportunity</u>: Week 1. Students read David Grembowski's "The Practice of Health Program Evaluation." Chapter 6 on "Evaluation of program implementation."</p> <p><u>Assessment Opportunity</u>: Evaluation case: Students are paired with a community-based organization that seeks an evaluation of a program. Students read the text, decide what study design to use, and what qualitative data to collect. Assessments are based on their selection of methods based on their understanding of theory, their implementation of the study design, and their presentation of findings to the client organization. A rubric is provided to students in the syllabus indicating the grading criteria.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	HSERV 533: COPHP Quantitative Methods, and the associated seminar, HSERV 592 C: Program Seminars	<p><u>Didactic Opportunity:</u> Week 6. Seminar guest lecture on designing randomized trials with community participation. □</p> <p><u>Assessment Opportunity:</u> In the Week 6-7 "Walk it Out" case, students design their own studies and collect their own data based on field observations of students arriving at neighborhood elementary schools. They consider issues of randomization and bias (clusters, selection, cross-contamination), data integrity (and ethical collection methods), causality, mediators/moderators/effect-modifiers, and how to measure the effects of interventions (in this case, to promote walking to school). Students design their own data collection tools, collect and analyze their own data, analyze their collective data in a single data set from multiple sites, make reports for classmates, and are graded by faculty.</p>
4. Interpret results of data analysis for public health research, policy or practice	HSERV 538: COPHP Evaluation Design and Community Organizing	<p><u>Didactic Opportunity:</u> Week 8-9: A consultant biostatistician instructs and coaches students to analyze their data using analysis software and assemble tables and graphs to portray results in their final report for the client organization. □</p> <p><u>Assessment Opportunity:</u> In Week 1, Students are paired with a community-based organization that seeks an evaluation of a program. In Week 10, students prepare their final report for the client organization portraying their interpretation of qualitative and quantitative findings in the program evaluation assignment. Students present the report in an oral session both in class and at the organization's home setting (for board, staff, etc). The final report is graded using a rubric.</p>
Public Health & Health Care Systems		
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings	HSERV 531: COPHP Population Health and Community Development (first block)	<p><u>Didactic Opportunity:</u> Week 2. Students identify their own sources to research the origins, structure, and function of public health care in each country, regulatory systems in the states and provinces, and also look at how the founding history of both the U.S. and Canada contribute to differences in the provision and purpose of health care in each country. □</p> <p><u>Assessment Opportunity:</u> Week 2. In Case 2 ("The 49th Parallel: A Health Divide"), students are asked to explore differences in health outcomes between the U.S. and Canada, as well as other economically similar nations. In addition to exploring differences in key health outcomes, the case study also guides students to analyze the origins of these differences. Each student in the class researches and writes a paper on a different dimension of these topics. Students read each others' work, give peer feedback on the content and writing, critique each others' arguments in class, and faculty provide feedback on the written work and the classroom discussion.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
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 societal levels	HSERV 531: CPHP Population Health and Community Development (first block)	<p><u>Didactic Opportunity:</u> Week 1. Students identify their own sources to research the environmental and socio-demographic factors that affect health, define healthy communities, and the factors that contribute to them, describe how the socio-economic status of populations is related to barriers to access of health and preventive health services, describe the history of public health in the U.S. related to the social determinants of health, describe the relationship between racism and health. □</p> <p><u>Assessment Opportunity:</u> Week 1. In Case 1 ("Americans: Dead First"), students create and deliver a 2-minute "elevator speech" on the health status of the U.S., explaining the ways in which social inequities and racism undermine population health. Faculty evaluate the speeches based on a rubric co-created with students (in advance) that assesses audience engagement, appropriate scientific tone, use of relevant and credible evidence and persuasion. □</p>
Planning & Management to Promote Health		
7. Assess population needs, assets and capacities that affect communities' health	HSERV 534: CPHP Health Behavior and Health Promotion and Environmental Health (first block), and the associated seminar, HSERV 592C: Program Seminars	<p><u>Didactic Opportunity:</u> Week 1. Faculty deliver a lecture on program planning models and health behavior theory, including the "Precede/Proceed" model and provide examples of how community health assessments are used to inform program development</p> <p><u>Assessment Opportunity:</u> Weeks 1-2. In Case 1 ("HIV Prevention in the 21st Century"), students develop formative research plans and collect and analyze secondary data to assess the needs and assets of populations at risk for contracting HIV in King County, WA. Students present their findings in oral presentations, which faculty assess using a rubric.</p>
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	HSERV 534: CPHP Health Behavior and Health Promotion and Environmental Health (first block), and the associated seminar, HSERV 592C: Program Seminars	<p><u>Didactic Opportunity:</u> Week 5. Students watch a recorded lecture from Dr. Philip Gardiner, an eminent tobacco studies scholar, on culturally tailored tobacco cessation policies and practices. □</p> <p><u>Assessment Opportunity:</u> Week 6. In case 3 ("Alive with Pleasure...for a Menthol Ban"), students apply knowledge of behavioral theory, program planning, and social marketing to design tobacco cessation interventions for one of three targeted audiences. Students prepare social marketing and intervention materials in written form, and present these orally to their classmates. Faculty assess these materials and presentations using a rubric.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
9. Design a population-based policy, program, project or intervention	HSERV 531: COPHP Population Health and Community Development (second block), and the associated seminar, HSERV 592C: Program Seminars	<p><u>Didactic Opportunity:</u> Weeks 5, 6. Lectures are presented in seminar on Community-Based Participatory Research and Stakeholder analysis.</p> <p><u>Assessment Opportunity:</u> Week 2. Each year faculty arrange new projects with rural health departments in Washington State. For each project, students work with health department personnel to understand the dimensions and scope of the project, clarify the deliverable, conduct data collection (mostly interviews and document reviews), assess the data, generate findings, create recommendations for interventions to improve health, write a report, and make an oral presentation to the health department. Faculty assess each of these components, comment and coach, and assign grades to individual students based on their personal contributions and the product of their collective effort.</p>
10. Explain basic principles and tools of budget and resource management	HSERV 540: COPHP Leadership and Management, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity:</u> Week 8. Students participate in a half-day seminar dedicated to the principles and tools of budget and resource management. A subject matter expert from UW's Harborview Hospital opens the seminar with a formative assessment of students' knowledge of budgeting and resource management. During the half-day seminar, students learn about budgeting, sources of funding, and return on investment analysis through didactic sessions and dialogue with presenters. □</p> <p><u>Assessment Opportunity:</u> Week 1. In this final course of their 2-year program, the seminar provides an opportunity for students to engage in paired work, small group work, and large group didactic learning. They learn how to use a budget as a tool to accomplish strategic goals, what are the sources of private and public funding, how to reallocate resources under constrained funding, and how those resources support organizational activities and how to look at returns on investment both from a fiscal perspective and community perspective. The seminar concludes with a student self-evaluation of what they have learned in the seminar and the subject matter expert's evaluation of student learning via observation of discussion throughout the day.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
11. Select methods to evaluate public health programs	HSERV 538: COPHP Evaluation Design and Community Organizing, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity:</u> Week 1. Students read and write summary papers on David Grembowski's text, "The Practice of Health Program Evaluation." Chapter 4 on Quasi Experimental Study Designs and Counterfactuals & Experimental Study Designs.</p> <p><u>Assessment Opportunity:</u> Week 1-4. Students spend the quarter designing and conducting evaluations for a real client, arranged by the faculty in advance. During the first four weeks, students analyze the logical framework for the program to be evaluated, then form research/evaluation questions and decide on methods and identify data sources. Students write an evaluation design proposal and present it to the client. The faculty and clients provide feedback on the design proposal, and students refine their proposal in response.</p>
Policy in Public Health		
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence	HSERV 537: COPHP Health Policy, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity:</u> Week 3. Students participate in a day-long field trip to the Hanford Nuclear Reservation in Richland, WA. Following the tour, faculty conduct a panel discussion in the Richland Library, with speakers representing the Hanford Advisory Board, the U.S. Environmental Protection Agency, the Washington State Department of Ecology, the Yakama Tribe's environmental protection staff, and the Plumbers & Steamfitters Union Local 598. These stakeholders present competing views on Hanford clean up policy, including tradeoffs between cost and environmental restoration. Ethical issues in the policy-making process are explored from multiple dimensions. □</p> <p><u>Assessment Opportunity:</u> Week 1 case, "You Never Die of Just One Thing." Students explore the policy and science behind management of anemia in Ghana. For this case, students are asked to research 18 topics ranging from international aid to attributable risk. Each student is assessed on two reports. In the culminating assignment, students are given a data set to analyze, with instructions to calculate attributable risk for anemia in relation to malaria and nutrition; they must then write a policy memo to the Minister of Health recommending a policy approach in light of the data they have analyzed.</p>
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	HSERV 531: COPHP Population Health and Community Development (second block), and the associated seminar, HSERV 592C: Program Seminars	<p><u>Didactic Opportunity:</u> Weeks 5 and 6. Lectures are presented in seminar on Community-Based Participatory Research and Stakeholder analysis. □</p> <p><u>Assessment Opportunity:</u> Week 6. Students study a rural health problem for a public health department or community org in Washington state. Students are asked to identify the stakeholders and map key assets and health issues in a rural community. Students are assessed on their ability to apply community development principles to tackle a rural health issue, effectively engage multiple rural stakeholders, and provide recommendations and evidence-based models to support rural partners' needs. □</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations	HSERV 537: CPHP Health Policy, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity</u>: Week 5. Lola Velazquez, an attorney with the NW Justice Project, delivers a guest lecture on the advocacy work of her organization to improve the quality of Farmworker Housing in Washington state.</p> <p><u>Assessment Opportunity</u>: Week 5. In the case, "Mystery at Saddle Mountain," students describe and critique the roles of government, businesses, and advocates in assuring the health and well-being of farmworkers, with an emphasis on housing during the harvest season. For the case final assignment, students receive a memo from the governor. After studying the issues during the previous week, they are assigned stakeholder roles (agriculture, local government, farmworkers union, etc.) and told to attend a meeting with the governor's "senior housing advisor" (their faculty member) during the next class period. Students must prepare a written handout or presentation and make an oral presentation in which they advocate for a policy position that addresses farmworker housing issues. They are encouraged to negotiate with other parties in advance to see if they can find overlapping interests or proposals. Students are graded on their work, using a rubric.</p>
15. Evaluate policies for their impact on public health and health equity	HSERV 537: CPHP Health Policy, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity</u>: Week 8. Mark Cooke, an attorney with the American Civil Liberties Union, speaks in the seminar on the health effects and inequities of U.S. policies generating mass incarceration.</p> <p><u>Assessment Opportunity</u>: Week 8-10. For the culminating case in this course, students are assigned a project with a real client who seeks a policy evaluation. In 2019, students worked with the Washington State Health Care Authority in the case, "Navigating Two Worlds." After researching issues related to Native and Indigenous behavioral health issues, students were asked to analyze the contract between the Health Care Authority and the state's managed care organizations. Their assignment was to review network adequacy, utilization management, care coordination and program integrity for Indian Health Care Providers' behavioral health and recovery programs. Faculty assessed the line-by-line edits students made to the integrated managed care contract, judged by how well they addressed Native concerns with behavioral health managed care. The state's Health Care Authority used these proposed edits in its next round of contract negotiations.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
Leadership		
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	HSERV 540: CPHP Leadership and Management, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity:</u> Week 7. In seminar, the chair of a health organization board is invited to present material on the roles and responsibilities of the board of directors, including how boards engage with management to set the culture of an organization and ways to effectively engage and focus the board on emerging issues and strategic decision making. □</p> <p><u>Assessment Opportunity:</u> Week 1-10. Students work through eight management and leadership cases, designed to address the range of skills and knowledge required for organizing workplaces and supervising people. Story problems are presented that present a wide range of learning objectives on leadership, governance, management, collaboration, decision making, and engaging stakeholders. Each case presents nine research questions, assigned to students who each write reports to answer the question. Students are also asked to assess their own leadership and management styles and skills, conduct interviews, and create their own career mission statements. These products are based on their synthesis of evidence they find on their own. Students read and discuss each other's work, and faculty edit and grade it using rubrics.</p>
17. Apply negotiation and mediation skills to address organizational or community challenges	HSERV 540: CPHP Leadership and Management, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity:</u> Week 6. Seminar on conflict resolution, including common causes of conflict, models for managing conflict, the effects of long-term conflict and alternative resolution strategies. □</p> <p><u>Assessment Opportunity:</u> Week 6. Students work through a case study on conflict management and engage in a professional development experience to help students identify how to negotiate and use conflict management skills in organizations to build stronger teams and communities. Students complete a self assessment of conflict styles and discuss the results in class. The professional development time includes understanding personal relationship with conflict, journaling, small group work and large group work. Each student writes a three-page paper on a topic related to a conflict management topic (aligned with the case study learning objectives), and that work is read and critiqued by peers; faculty grade and give feedback on these papers. □</p>
Communication		
18. Select communication strategies for different audiences and sectors	HSERV 534: CPHP Health Behavior and Health Promotion and Environmental Health (first block), and the associated seminar, HSERV 592C: Program Seminars	<p><u>Didactic Opportunity:</u> Week 3. Guest lecture from crisis communication specialist. □</p> <p><u>Assessment Opportunity:</u> Week 2. Students organize and participate in a mock town hall, playing the roles of concerned community members, public information officers and community leaders. Case involves an infectious disease outbreak among an ethnic minority population in a public high school. Students produce written materials related to their role in the town hall. Faculty observe the town hall and evaluate the performance of students using a rubric. □</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	HSERV 595: Practicum/Field Work in Community Medicine HSERV 598: Executive Master of Public Health Capstone	<u>Didactic Opportunity:</u> Week 4. Public health communication specialists present materials on effective graphic design, presentations, and communication technique. <u>Assessment Opportunity:</u> Final week of first year, final week of second year. Students are called on to regularly prepare products for community-based partner organizations in their practicums and capstones. Each student completes a practicum during the first year, where they are assigned to work at an organization (usually Public Health-Seattle & King County). Students, their site supervisors, and their faculty advisors sign a contract describing the deliverables expected. At the end of the six-month practicum, each student makes an oral presentation and produces a written report for the site supervisor. Similarly, students in their second year select a capstone project. This, too, requires a written contract with a site supervisor and a faculty advisor, a written product and an oral presentation. Students are assigned individual faculty advisors for these large projects, who complete rubric-based assessments and grade the reports and presentations, as well as how well students interacted with their organizations.
20. Describe the importance of cultural competence in communicating public health content	HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health (second block), and the associated seminar, HSERV 592C: Program Seminars	<u>Didactic Opportunity:</u> Week 3. Lecture on communications strategies for advising south Seattle's diverse communities, some without English as a first language, who live along the Duwamish River Superfund Site. <u>Assessment Opportunity:</u> Week #4. In their environmental health block, students study the health effects of lead in the water (in the case, "Flint Drinking Water Crisis") and of aqueous film forming foams (AFFF) used in military, industrial, and firefighting settings (in the case, "Why do you want to test my well?"). Because the of the diminished political power of low-income populations and people of color, the location of environmentally hazardous settings is often concentrated where people with less privilege live and work. Students learn about environmental justice concerns and how to communicate with populations about these hazards, by identifying learning objectives in their cases, writing research papers, reading each others' papers, and discussing the material in class. Using standard COPHP rubric for writing papers and for class participation, faculty grade the posts and contribution to discussion.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
Interprofessional Practice		
21. Perform effectively on interprofessional teams	HSERV 538: CPHP Evaluation Design and Community Organizing, and the associated seminar, HSERV 592D: Program Seminars	<p><u>Didactic Opportunity:</u> Week 1-10. Students "meet the client" they have been assigned during the first week of the quarter. The client is a community-based organization or government agency, represented by a range of professional or lay individuals. In the case evaluating homeless programming, students meet with individuals experiencing homelessness, social workers, politicians, city planners, religious leaders (who are providing resources and space), medical care providers, and others. □</p> <p><u>Assessment Opportunity:</u> Weeks 4 and 10. At week 4, students present their proposed evaluation plan to their agencies, in both written and oral form. In week 10, students present their final evaluation products. These are opportunities to engage with the largest range of client personnel, but they must engage with client representatives throughout the ten-week quarter. Faculty observe and assess these interactions to assess student skills for listening, understanding, and responsiveness. Faculty provide student feedback and grade presentations and products.</p>
Systems Thinking		
22. Apply systems thinking tools to a public health issue	HSERV 531: CPHP Population Health and Community Development, and the associated seminar, HSERV 592C: Program Seminars	<p><u>Didactic Opportunity:</u> Week 5. Scott Winn, MSW, presents a public health situation analysis employing a lens of racial equity and intersectionality that moves beyond merely valuing racial diversity to creating racial equity. His framework discusses how to lead with a racial equity lens, as an essential component of a strategy for structural transformation to create equity for all.</p> <p><u>Assessment Opportunity:</u> Week 1-2. Students work through two specific case studies ("Americans: Dead First" and "The 49th Parallel") in which they learn about the declining health status of Americans (measured mostly by declining life expectancy), and the various interacting factors causing this decline. Faculty members lead students through a root-cause analysis of U.S. health status using the "but why" technique and applying systems thinking to find a solution. Students work in pairs to draw out a root cause analysis of a particular health outcome and then collaborate as a class to refine the root cause analysis technique. Students are given in-the-moment feedback from faculty about their analytical approach and their visual organization of the root cause analysis. In the second case study, each student in a section takes one of nine research questions, writing two reports on unique learning objectives that analyze different dimensions of the relative health status of the U.S. and economically similar nations. In these papers, one page of text must be an infographic that visually depicts a root cause analysis and/or otherwise illustrates a visual conceptual model of the public health issue(s) discussed in the paper and another page must address systems thinking approaches. Students read and discuss each other's work, and faculty edit and grade it.</p>

Assessment of Competencies for MPH: Online Master of Public Health		
Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ^a
Evidence-based Approaches to Public Health		
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	EPI 511: Introduction to Epidemiology	<p><u>Didactic Opportunity</u>: Weeks 1-12. Lectures and readings from required texts, 1. Gordis, L. Epidemiology (5th Ed.) Chapters 1-5, 7-15; and, 2. Aschengrau A, Seage G. Essentials of Epidemiology in Public Health (3rd Ed), Chapters 1-3, 6-11, 13, 15-16.</p> <p><u>Assessment Opportunity</u>: 1. Weekly homework problem sets: Weeks 1-11. Short response questions that ask students to apply the epidemiologic concepts and methods learned in each topic area every week. 2. Quizzes: Weeks 3 and 8. Multiple choice questions where students apply epidemiologic concepts and methods to choose best responses for questions with multiple potential responses. 3. Midterm and final: Weeks 5 and 12, respectively. Short answer questions that ask students to apply epidemiological concepts and methods (e.g., study or analytic design, or, measures of disease prevalence) to different settings and situations in public health practice.</p>
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	<p>HSERV 520: Methods in Applied Community Research</p> <p>HSERV 517: Qualitative Research Methods: An Introduction</p>	<p>HSERV 520: quantitative</p> <p><u>Didactic Opportunity</u>: Weeks 5 and 6 lectures and readings. Week 5 readings: West SG, Duan N, Pequegnat W, et al. Alternatives to the Randomized Controlled Trial. American Journal of Public Health. 2008;98(8):1359-1366. Polit DF, Hungler BP. Nursing research: principles and methods. 6th ed. Philadelphia: Lippincott. 1999. CH 2. Overview of the Research Process. Week 6 readings: Baum F. Researching public health: behind the qualitative-quantitative methodological debate. Social Science & Medicine. 1995; 40(4): 459-468. Boynton PM, Greenhalgh T. Selecting, designing, and developing your questionnaire. British Medical Journal. 2004;328: 1312-1315.</p> <p><u>Assessment Opportunity</u>: Week 8. Research Proposal: Students are asked to submit an explanatory (quantitative) research proposal to answer their research question. The proposal should include detailed information about how the outcomes and covariates will be measured, including information about specific instruments used; note any potential issues with the validity and reliability of study design; identify any potential forms of bias in study design; identify one or more key populations that study results should be shared with to encourage research dissemination.</p> <p>HSERV 517: qualitative</p> <p><u>Didactic Opportunity</u>: Week 5. Reading: Tolley EE, Ulin PR, Mack N, Robinson ET, Succop SM. Qualitative Methods in Public Health: A Field Guide for Applied Research (2nd). John Wiley & Sons; 2016. Chapter 4, Collecting Qualitative Data.</p> <p><u>Assessment Opportunity</u>: Week 5. Students select the qualitative data collection methods most appropriate for a specific public health research question. They must explain the strengths and weaknesses of the different data collection methods and they must develop a topic guide to be used in a qualitative study.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	<p>BIOST 502: Introduction to Statistics in Health Sciences</p> <p>HSERV 517: Qualitative Research Methods: An Introduction</p>	<p>BIOST 502: quantitative</p> <p><u>Didactic Opportunity:</u> Week 1-10. Lectures and instructor-developed course notes focused on selection and application of biostatistical approaches and use of statistical software. Textbook: Essentials of Biostatistics in Public Health, 3rd edition. Lisa M. Sullivan, Jones and Bartlett Publishers, 2018.</p> <p><u>Assessment Opportunity:</u> Week 10. Students complete a data analysis project: describe the study subjects in your data set, and determine which variables in your data set are associated with coronary heart disease. Steps include creating a table, describing association between coronary heart disease and variables, and assess/test for association with quantitative methods.</p> <p>HSERV 517: qualitative</p> <p><u>Didactic Opportunity:</u> Week 6. Reading: Tolley EE, Ulin PR, Mack N, Robinson ET, Succop SM. Qualitative Methods in Public Health: A Field Guide for Applied Research (2nd). John Wiley & Sons; 2016. Chapter 6, Qualitative Data Analysis. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006;3:77-101. Vaismoradi M, Turunen H, Bondas T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. Nursing and Health Sciences. 2013.</p> <p><u>Assessment Opportunity:</u> Week 6. Students analyze qualitative data using thematic analysis. Students must conduct a thematic analysis of provided interview transcripts, including coding the transcripts, developing and defining themes, and providing participant quotes to support the themes.</p>
4. Interpret results of data analysis for public health research, policy or practice	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Week 5 readings: French-Constant, L. (2014). How to plan, write and communicate an effective policy brief: three steps to success. Research to Action, and Wolfe, R. (2013). POLICY BRIEFS: A guide to writing policy briefs for research uptake. London, London School of Tropical Medicine & Hygiene.</p> <p><u>Assessment Opportunity:</u> Week 10. Students write an Advocacy Policy Brief on a population health topic related to improving health in the U.S., addressed to a branch of the Federal Government that argues in favor of a particular course of action for our compromised health status that needs to be addressed urgently. Students are assessed on how they provide background to the problem, interpret published research results to support a policy, and stimulate the reader to take action.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
Public Health & Health Care Systems		
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings	HSERV 516: Introduction to Health Services	<p><u>Didactic Opportunity:</u> Weeks 1-4: Chapters 1, 2, 5, 6, 7, 10, in "Understanding Health Policy: A Clinical Approach," Bodenheimer and Grumbach. Weeks 5, 6, 7: Chapters 1, 2, 3, 6, in "Introduction to Public Health Promises and Practice," Goldstein and Dwelle.</p> <p><u>Assessment Opportunity:</u> Weeks 1-7: Required weekly contributions to discussion boards following these general prompts: a. What did you learn about health care/public health that surprised you?, b. Has your personal or professional experience supported or refuted any assertions made by the authors? c. Do you see ways in which health care and public health are similar? Different? Weeks 1-7: Required weekly postings to a personal learning journal following these general prompts: a. What one thing most surprised you in this week's readings/discussion?, b. What one thing do you feel you need to better understand after digesting this week's readings/discussion?</p>
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 societal levels	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Week 1. National Research Council and Institute of Medicine (2013). U.S. Health in International Perspective: Shorter Lives, Poorer Health. Washington, DC, The National Academies Press. Summary pages 1-9). Wilkinson, R. and K. E. Pickett (2011). The Spirit Level: Why greater equality makes societies stronger. New York, Bloomsbury.</p> <p><u>Assessment Opportunity:</u> Week 7: Students organize and provide a written report of a Community Outreach Event (COE) during which they discuss with a non-academic audience of their choice how social determinants such as income inequality or structural racism lead to health inequities</p>
Planning & Management to Promote Health		
7. Assess population needs, assets and capacities that affect communities' health	HSERV 504: Health Promotion and Behavior Change Communication	<p><u>Didactic Opportunity:</u> Weeks 1, 2. Glanz, K., Rimer, B., & Viswanath, K. (Eds.) (2015). Health Behavior: Theory, Research and Practice, 5th edition. Jossey Bass. Chapters 1 and 2.</p> <p><u>Assessment Opportunity:</u> Weeks 4, 5. Individual Research Assignment: Formative Audience Research. Students interview members of a community to assess assets and capacities related to a specific health problem.</p>
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	HSERV 504: Health Promotion and Behavior Change Communication	<p><u>Didactic Opportunity:</u> Weeks 2, 3. Glanz, K., Rimer, B., & Viswanath, K. (Eds.) (2015). Health Behavior: Theory, Research and Practice, 5th edition. Jossey Bass. Chapters 4-6.</p> <p><u>Assessment Opportunity:</u> Weeks 5 and 10. Individual Research Assignment: Formative Audience Research. Students interview members of a community to understand what cultural values and practices influence their attitude toward a specific health problem. Students then use this information to design a health behavior change intervention, which they describe in a final paper and presentation.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
9. Design a population-based policy, program, project or intervention	HSERV 504: Health Promotion and Behavior Change Communication	<u>Didactic Opportunity:</u> Week 6. Glanz, K., Rimer, B., & Viswanath, K. (Eds.) (2015). Health Behavior: Theory, Research and Practice, 5th edition. Jossey Bass. Chapters 4-6., Chapter 7: Stages of Change <u>Assessment Opportunity:</u> Week 6. Students prepare an individual annotated bibliography summarizing health promotion intervention research on a specific health problem. Students are then required to propose a population-based intervention based on the annotated bibliography, which is informed by the stages of change model.
10. Explain basic principles and tools of budget and resource management	HSMGMT 572: Financial Management for Health Professionals	<u>Didactic Opportunity:</u> Week 5. Lecture notes and video lecture on Managerial Accounting, Budgeting, and Variable vs. Fixed Costs <u>Assessment Opportunity:</u> Week 5. Quiz and homework testing understanding of basic principles and tools of budget and resource management.
11. Select methods to evaluate public health programs	HSERV 522: Health Program Evaluation	<u>Didactic Opportunity:</u> Weeks 1-7 lectures and readings on the steps of planning for, designing, and conducting a program evaluation. <u>Assessment Opportunity:</u> Week 10. Evaluation design project, consisting of three parts: development of a logic model, program description, and process evaluation, as well as an overall evaluation plan paper.
Policy in Public Health		
12. Discuss multiple dimensions of the policy making process, including the roles of ethics and evidence	HSERV 559: Public Policy and the Public's Health	<u>Didactic Opportunity:</u> Week 2 readings on the multiple dimensions of the policy making process. Lectures, guest speakers, videos, and small group exercises in week 3 on these theories, policy making examples, including evidence, values, and ethics evidence and ethical considerations. Week 4, Health Affairs reading (page 103), class discussion on a framework of the multiple dimensions of policy making. Readings/resources: Redman, Eric. The Dance of Legislation, University of Washington Press, 1973. Gerston LN. Chapter 1. The Context of Public Policy. In: Public Policy Making: Process and Principles (3rd e.) (pp 3-21) Armonk: M.E. Sharpe. Kingdon, John Agendas (2011) Chapter 1 and 8, Alternatives and Public Policy, Longman; Atkins D, Siegel J, Slutsky J. Making policy when the evidence is in dispute. Health Affairs 2005;24(1);102-113. <u>Assessment Opportunity:</u> Week 2. Students submit a written assignment that describes how the theories in The Context of Public Policy. In: Public Policy Making: Process and Principles Chapter 1, or Alternatives in Public Policy Chapter 1 and 8 were reflected in the multiple dimensions of the policy making process relayed through Eric Redman's experience, including value/ethics and evidence.

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	HSERV 559: Public Policy and the Public's Health	<p><u>Didactic Opportunity:</u> Week 3 lectures with guests, small group work, and discussion on the role of lobbyist, advocates, vendor community, and community members; week 4 reading and discussion of specific strategies (pg 167 of Am Jour Prev Med) discussed; week 8 lecture and discussion of the advocacy for policies. Readings/resources: Sarah Kliff. "The Lessons of Washington State's Watered Down 'Public Option': A big health care experiment for Democrats shows how fiercely doctors and hospitals will fight." The New York Times. June 27, 2019; Sharfstein JM. Dear health care lobbyists. Milbank Quarterly 2015; 93:15-18. doi: 10.1111/1468-0009.12099. Gerston LN. Chapter 1, The Context of Public Policy. In: Public Policy Making: Process and Principles (3rd e.) (pp 3-21) Armonk: M.E. Sharpe. Kingdon, John Agendas (2011) Chapter 1, 8, Alternatives and Public Policy, Longman; Atkins D, Siegel J, Slutsky J. Making policy when the evidence is in dispute. Health Affairs 2005;24(1):102-113. Griffiths EP. Effective legislative advocacy, Lessons from successful medical trainee campaigns. N Engl J Med 2017;376:25:2409-2411 doi: 10.1056/NEJMp1704120. Brownson RC, Royer C, Ewing R, McBride TD. Researchers and policymakers: Travelers in parallel universes. Am J Prev Med 2006;30(2):164-172.</p> <p><u>Assessment Opportunity:</u> Week 4. Students select three approaches described in the Journal of Preventative Medicine which includes stakeholder identification, coalition building, and partnerships, and describe how each was or could be applied in the policy to raise the tobacco age to 21.</p>
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations	HSERV 559: Public Policy and the Public's Health	<p><u>Didactic Opportunity:</u> Week 5. Lecture, readings, video, and discussion of prioritization and advocacy in the context of expensive infection disease curative treatment; week 9 readings and discussion of approaches to address disparities through advocacy, policy development, and budgeting. Readings/resources: Maciosek MV, LaFrance AB, Dehmer SP, et al. Updated priorities among effective clinical preventive services. Ann Fam Med 2017;15:14-22. Detsky AS, Naglie IG. A clinician's guide to cost-effectiveness analysis. Annals of Internal Medicine. 1990;113:147-154: Samantha Artiga and Elizabeth Hinton. Beyond Health Care: The Role of Social Determinants of Health in Health and Health Equity. Kaiser Family Foundation. May 2018. Stachowiak, Sarak. PATHWAYS FOR CHANGE: 10 Theories to Inform Advocacy and Policy Change Efforts. ORS Impact; October 2013.</p> <p><u>Assessment Opportunity:</u> Week 10. Students advocate for a policy solution through a final group project by proposing a specific public policy solution based on population need, and including an alternative solution, stakeholder engagement plans, resource needs, barriers to implementation, and methods of evaluation.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
15. Evaluate policies for their impact on public health and health equity	HSERV 559: Public Policy and the Public's Health	<p><u>Didactic Opportunity:</u> Week 4. Review of how evidence is used to create policy and the impacts through lecture, readings, and discussion; week 5, effectiveness review through readings, lecture and discussion; week 7, Review, lecture, and discussion on policy development and impact. Readings/resources: T.R. The Healing of America: A Global Quest for Better, Cheaper and Fairer Care, Penguin Books, 2009. Zinsser, William. On Writing Well, Quill HarperCollins, 2010. Atkins D, Siegel J, Slutsky J. Making policy when the evidence is in dispute. Health Affairs 2005;24(1);102-113. Detsky AS, Naglie IG. A clinician's guide to cost-effectiveness analysis. Annals of Internal Medicine. 1990;113:147-154. Emmanuel, Ezekiel. Reinventing American Healthcare. New York: PublicAffairs; 2014. Chapter 8 (pp 201 – 258).</p> <p><u>Assessment Opportunity:</u> Week 9. Students identify and evaluate policies, and their impact on a life-stage, based on specific population needs, and barriers to implementation, and select one of the policy theory of change to describe how that change theory can be used to overcome those barriers.</p>
Leadership		
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	HSMGMT 560: Management Practice in Health Care and Public Health Organizations	<p><u>Didactic opportunity:</u> Weeks 1, 2, 4, 5, 7, 8. Chapters 4-8, 11 from textbook "Essentials of Managing Public Health Organizations" by James A. Johnson and Kimberly S. Davey. Published by Jones & Bartlett Learning (December 10, 2019), and video lectures</p> <p><u>Assessment opportunity:</u> Week 1: Individual students read and provide analysis and recommendations on "The School Cafe" Case via a Discussion Forum and then in class synchronous discussion. Students are assessed using a rubric for the Discussion Forum. Week 5: students have an individual assignment to evaluate and then develop diversity improvement action items for an organization. Week 7: Individual students must develop a Strategic Planning roadmap for an organization that identifies how they will establish the Mission, Vision, and Values and then assess the environment using a Strengths, Weaknesses, Opportunities, and Threats framework and the steps they will take to create a Strategic Plan. This assignment is assessed using a rubric. Week 8: Individual students are given a case to read and asked to identify the organization design to address questions from the case regarding centralized vs. decentralized decision making, and how to effectively delegate tasks and responsibilities to their subordinates.</p>
17. Apply negotiation and mediation skills to address organizational or community challenges	HSERV 567: Strategic Leadership of Public Health Systems (<i>noted as HSERV 590 in syllabus file in the ERF</i>)	<p><u>Didactic opportunity:</u> Week 5. Live webinar with panel of community leaders who speak to cross-system collaboration challenges in communities with diverse opinions and strategies to bring people together.</p> <p><u>Assessment opportunity:</u> Week 5. Students submit 2-3 written paragraphs about cross-system collaboration challenges as it pertains to their public health problem, with potential strategies for effective communication related to their challenges.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
Communication		
18. Select communication strategies for different audiences and sectors	HSERV 504: Health Promotion and Behavior Change Communication	<p><u>Didactic Opportunity:</u> Week 7. Glanz, K., Rimer, B., & Viswanath, K. (Eds.) (2015). Health Behavior: Theory, Research and Practice, 5th edition. Jossey Bass. Chapter 21: Social Marketing.</p> <p><u>Assessment Opportunity:</u> Week 7. Discussion Post. Students propose materials and products to market a public health campaign/message and evaluated for how well those proposals potential match to the audience/process evaluation</p>
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	HSERV 504: Health Promotion and Behavior Change Communication	<p><u>Didactic Opportunity:</u> Week 1-10 . Glanz, K., Rimer, B., & Viswanath, K. (Eds.) (2015). Health Behavior: Theory, Research and Practice, 5th edition. Jossey Bass.</p> <p><u>Assessment Opportunity:</u> Week 10. Individual component of a group public health presentation is evaluated for effective, creative, compelling communication techniques/materials/content. Criteria for evaluation include engagement, communication of key points, is delivered to time expectations.</p>
20. Describe the importance of cultural competence in communicating public health content	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Weeks 3, 6, 8 readings: "Five filters of Mass Media" by Noam Chomsky; Niederdeppe, J., C. A. Bigman, A. L. Gonzales and S. E. Gollust (2013). "Communication About Health Disparities in the Mass Media." Journal of Communication 63(1): 8-30. Acemoglu, D. and J. Robinson (2009). "Foundations of Societal Inequality." Science 326(5953): 678-679.</p> <p><u>Assessment Opportunity:</u> Week 7. Students organize and provide a written report of a Community Outreach Event (COE) during which they discuss with a non-academic audience of their choice how social determinants such as income inequality or structural racism lead to health inequities. Students submit a report after organizing the event, and are asked to summarize the setting, audience, reflect on their experience in engaging audiences, and suggest what changes they would make for future culturally-competent engagements with the community.</p>

Competency	Course number(s) and name(s)*	Describe specific assessment opportunity ⁿ
Interprofessional Practice		
21. Perform effectively on interprofessional^ teams	ENV H 512: Environmental and Occupational Health HSERV 567: Strategic Leadership of Public Health Systems UW iPALS	<u>Didactic opportunity:</u> ENV H 512. Week 2: Students complete the eLearning module Lamb, G. (2015, September). What Is Interprofessional Education? (Y. Price, Designer.) [Interactive video module]. Center for Advancing Interprofessional Practice, Education & Research, Arizona State University, Phoenix. http://links.asu.edu/fm1 . After completing this module, students participate in an online IPALS session available through the UW Center for Health Sciences Interprofessional Education, Research & Practice. <u>Assessment opportunity:</u> HSERV 567. Week 3. Students write a paper describing the experience and group work conducted during the UW IPALS session(s); how they and/or others performed effectively, what was learned, and how they plan to apply these lessons to work with interprofessional teams/individuals going forward in their career.
Systems Thinking		
22. Apply systems thinking tools to a public health issue	HSERV 567: Strategic Leadership of Public Health Systems	<u>Didactic Opportunity:</u> Weeks 2-5. Chapters 4-13 from Stroh, D. P. (2015). Systems thinking for social change: A practical guide to solving complex problems, avoiding unintended consequences, and achieving lasting results. Chelsea Green Publishing. <u>Assessment Opportunity:</u> Week 7. Students develop a systems map pertaining to their chosen public health issue and present the map, interdependencies, logic models. and stakeholders via a class presentation.

A note about competency D2-21: *Perform effectively on interprofessional teams*. All MPH students are required to attend at least one interactive session of the UW iPALS. These sessions are provided through the UW Center for Health Sciences Interprofessional Education Research and Practice: <https://collaborate.uw.edu/>. This Center coordinates interprofessional academic learning sessions (iPALS) for the UW schools in health sciences. Students work together interprofessionally within School of Dentistry, School of Medicine, School of Nursing, School of Public Health, and School of Social Work.

- 3) **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.**

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\D2.3.

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

Strengths

The mapping of the MPH competencies to the state-supported Common Core courses is a newly emerging strength. As described in section D1.3, several years of focused work to re-envision the School's MPH curriculum led to the development of a wholly new Common Core, to be taken as a single cohort by all entering MPH graduate students (in the state-supported degrees). In 2018, the School developed six new courses with concepts and resulting content distributed amongst them. In early 2019, draft syllabi were developed which addressed both the CEPH 12 Foundation Public Health Knowledge Competencies and the 22 Foundational Competencies. As referenced in section D1.3, the underlying goal, which had become the touchstone in this work, was to ensure the School could adequately prepare MPH graduates for successful careers in public health practice and in public health research, consistent with the School's mission.

Creating these courses using backwards design was a School-wide effort with faculty working groups formed for each of the new courses, as well as an overall steering committee that led the process and included faculty, staff, and students. The resulting mapping in the templates within the D1 and D2 Criterion a strength. As of January 2020, a new administratively-focused steering committee was formed to ensure the School would have a successful launch of the new Common Core and revised curriculum for all 13 state-supported MPH degrees in Autumn Quarter 2020 (the list of steering committee members provided in Criterion A1).

Faculty were selected to team-teach these new courses (two faculty per course) in the summer of 2019, and met regularly during the 2019-2020 academic year. The faculty participated in evidence-based, active-learning, and student-centered teacher trainings. They coordinated with each other on content within and between courses to ensure curriculum was adequately covered, built on learnings throughout the new Common Core, and did not overlap in ways that would not be helpful to student learning. The renewed focus on student-centered learning is a strength.

To help guide the new Common Core, the School created two new positions: an MPH core director and an MPH core program manager. These roles now lead the steering committee, work with departments and programs for cross-collaborative MPH needs, and manage a new measurement and evaluation process (M&E).

The current M&E plan for both the MPH Common Core and the MPH program overall was described in Criterion B6. Elements of the MPH Common Core and program are evaluated by the instructors, the MPH Steering Committee, the department chairs of the faculty's home department, and the SPH Curriculum and Education Policy Committee. This robust evaluation plan is a strength.

D3. DrPH Foundational Competencies

This section not applicable to this School of Public Health.

D4. MPH Concentration Competencies

- 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 will present a separate matrix for each concentration.**

State-supported programs

Assessment of Competencies for MPH, Environmental and Occupational Health		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Assess and contrast the roles and responsibilities of state and federal governments in environmental health policy development and implementation.	ENV H 584: Environmental Health Policy and Practice	<u>Didactic Opportunity</u> : Weeks 1-7. Week 1 includes two lectures on the structure of government and the role of state and federal governments. For each of the environmental health policy acts (e.g., Clean Water Act, Clean Air Act, etc.) presented in Week 2-7, the role of state and federal government in its implementation and/or state equivalent laws (e.g., National Environmental Policy Act) are discussed. All include corresponding readings from the textbook. <u>Assessment Opportunity</u> : Week 7: Progress exam: A midterm that includes multiple choice questions about the different levels of government involved in different environmental health policy implementation.
2. Describe the roles of politics, public opinion, and economics in environmental health policy development.	ENV H 584: Environmental Health Policy and Practice	<u>Didactic Opportunity</u> : Week 1-3. In week 3, students view Climate of Doubt and engage in a discussion-based activity about the role of politics, economics, public opinion, and science on policy development. <u>Assessment Opportunity</u> : Week 5. Public Meeting Assignment. Students attend a public meeting on an environmental health topic of their choice and summarize their experience. Week 7: Progress exam: A midterm that includes a short answer question about the different factors that influence policy development.
3. Develop and evaluate strategies and approaches to address environmental health issues.	ENV H 584: Environmental Health Policy and Practice	<u>Didactic Opportunity</u> : Week 7. Lectures on Environmental Health Practice. Week 8, 9: readings on PACE-EH framework. <u>Assessment Opportunity</u> : Week 10. Evaluation Plan Design: Students develop an evaluation plan for the solution to an environmental public health problem that they recommended in their briefing memo.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
4. Assess the magnitude, determinants, and impacts of a community-level environmental health issue.	ENV H 584: Environmental Health Policy and Practice	<u>Didactic Opportunity</u> : Week 7. Lectures: Environmental Health Practice and Briefing Memo video. <u>Assessment Opportunity</u> : Week 10. Briefing Memo: Students work independently to describe the magnitude and impacts of an environmental health problem.
5. Develop strategies to communicate about environmental health policy issues for different audiences or sectors, using different media.	ENV H 584: Health Environmental Policy and Practice	<u>Didactic Opportunity</u> : Weeks 2, 3, 7. Briefing memo video. <u>Assessment Opportunity</u> : Week 5. Public comment: As an addendum to their public meeting assignment, students write a brief, evidence-informed public comment that could be delivered at the public meeting to inform policymakers about the environmental health impacts of the issue or proposed policy. Week 6: Expert Testimony Development: Students develop expert testimony synthesizing complex evidence for lawmakers to consider as part of policy development.
Assessment of Competencies for MPH, Environmental and Occupational Health: Occupational Medicine Residency		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Evaluate injuries and illnesses that are occupationally or environmentally related within the occupational and environmental health regulatory environment and systems.	ENV H 550: Occupational and Environmental Disease	<u>Didactic Opportunity</u> : Week 3, 7. Students view recorded mini-lectures, reports, publications, guidelines, and multimedia materials on one representative occupational and environmental disease in week 3 (low back musculoskeletal disorders), and another in week 7 (silicosis) for which the occupational and environmental health regulatory environment and systems need to be considered in individual-level and population-level injury and disease evaluation and management. <u>Assessment Opportunity</u> : Week 3, 7. Students prepare and lead discussion presentations on how medical guidelines and coverage policies (week 3), and health and safety rulemaking (week 7), apply to the evaluation and management of the specific occupational and environmental injuries and diseases of these weeks and complete weekly reflections. Discussion presentations and weekly reflections are individually graded.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Apply evidence-based approaches to managing occupational and environmental injuries and diseases.	ENV H 597: Case Studies in Environmental and Occupational Health	<p><u>Didactic Opportunity</u>: Weeks 2-8. Students review best-practices guidelines and peer-reviewed publications relevant to epidemiology/natural course, diagnosis, and management of specific cases.</p> <p><u>Assessment Opportunity</u>: Weeks 2-8. Students prepare and present cases, including management approaches to cases, and develop evidence-based teaching point summaries to support proposed management decisions, both of which are individually graded.</p>
3. Recognize, evaluate, and treat human exposures to physical, chemical, or biological hazards at work or in the general environment.	ENV H 564. Recognition of Health and Safety Problems in Industry ENV H 550: Occupational & Environmental Disease	<p>ENVH 564</p> <p><u>Didactic Opportunity</u>: Weeks 2, 4, 6, 8, 10. Students participate in worksite visits.</p> <p><u>Assessment Opportunity</u>: In week 10, a report is due that, in part, summarizes and evaluates the physical, chemical, and biological hazards that students recognized during the site visit on week 8.</p> <p>ENVH 550</p> <p><u>Didactic opportunity</u>: Weeks 1-9. Students view recorded mini-lectures and guest expert lectures, guidelines, and peer-reviewed publications on the management and treatment of occupational and environmental diseases caused by exposures to physical, chemical, and biological hazards.</p> <p><u>Assessment opportunity</u>: Weeks 1-10. Students complete weekly multiple-choice quizzes on occupational and environmental disease treatment and management, and work together to develop a final presentation on emerging and global environmental and occupational diseases that incorporates treatment and management of diseases. Quizzes and final presentations are individually graded.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
4. Integrate aspects of surveillance and principles of exposure assessment into primary and secondary prevention of occupational and environmental disease.	ENV H 596: Current Issues in Environmental and Occupational Medicine	<p><u>Didactic Opportunity:</u> Weeks 3, 4 cover an overview and specific aspects of surveillance. Week 3 focuses on workplace medical surveillance and standards, and Week 4 focuses on public health surveillance in occupational health. Students view recorded mini-lectures and review background readings and peer-reviewed journal articles on surveillance principles, including hazard/exposure surveillance and assessment relevant to occupational and environmental diseases.</p> <p><u>Assessment Opportunity:</u> Weeks 3, 4. Students prepare for and lead interactive discussions of peer-reviewed journal articles focused on different types of surveillance relevant to the primary and secondary prevention of occupational and environmental diseases. Students discuss scenarios that highlight and allow them to apply surveillance principles including exposure considerations while considering the implications for prevention of occupational and environmental diseases. Interactive discussions of journal articles and scenarios are individually graded.</p>
5. Describe occupational health disparities and formulate a plan to mitigate individual and organizational factors in the workplace in order to optimize the health of the worker.	ENV H 596: Current Issues in Environmental and Occupational Medicine	<p><u>Didactic Opportunity:</u> Week 5 covers disparities in occupational health. Students view recorded mini-lectures and review background materials and peer-reviewed journal articles on occupational health disparities.</p> <p><u>Assessment Opportunity:</u> Week 5. Students review and propose solutions to case studies on occupational health disparities using principles highlighted during the didactic opportunity. Interactive discussion of the case studies are individually graded.</p>
Assessment of Competencies for MPH, Environmental and Occupational Health: One Health		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Create comprehensive diagrams of human-animal-environment systems and use them to identify important connections ranging from the micro to macro level using the ECOHAB (Exposure/Comparative Medicine/Occupational Health/Human-Animal-Nature Bond/Agriculture/Biodiversity) framework.	ENV H 501: Foundations of Environmental and Occupational Health ENV H 539: One Health: Human and Animal Health in a Changing Environment	<p><u>Didactic Opportunity:</u> ENVH 539. Week 1 Introductory lecture, this micro to macro systems concept for One Health relationships between humans, environments, and animals is presented. Week 2 reading, reinforced in Rabinowitz et al BMJ 2018. In ENV H 501, the micro to macro approach is presented in the Session 2 (EOH approach lecture). Concept mapping is presented in Week 3 session 3 in class lecture.</p> <p><u>Assessment Opportunity:</u> ENVH 501. There is a graded concept map applying these concepts in week 3, and another applying to a different environmental problem in week 16.</p> <p><u>Assessment Opportunity:</u> ENVH 539. Final: short essay question: students are asked to outline a One Health approach to a complex problem (conservation in Papua New Guinea) that requires them applying this concept.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Perform comparative exposure analyses of a wide variety of human/animal environmental exposures and develop comprehensive, interdisciplinary work plans to address these exposures.	ENV H 539: One Health: Human and Animal Health in a Changing Environment	<u>Didactic Opportunity</u> : Module 2 is the Exposure module where these concepts are presented. Session 3: Zoonotic exposures, Session 4: Toxic exposures, Session 5: animals as sentinels of environmental exposures. <u>Assessment Opportunity</u> : Midterm. Questions about toxic and zoonotic exposures and animals as sentinels, including a question requiring students to analyze human-animal-environment exposure pathways for a particular hazard.
3. Use a comparative medicine, species-spanning approach to develop integrated clinical approaches to addressing environmental health challenges.	ENV H 539: One Health: Human and Animal Health in a Changing Environment	<u>Didactic Opportunity</u> : Session 6. Lecture comparative medicine and natural animal models. Session 7: lecture on collaborative veterinary and medical clinical care, Session 9: Dog aging study, natural animal models. Supportive reading for these sessions. <u>Assessment Opportunity</u> : Midterm. Questions on natural animal models, interpret data.
4. Design comprehensive occupational health programs for a variety of animal worker workforces/worksites.	ENV H 53: 9One Health: Human and Animal Health in a Changing Environment ENV H 586: Current Issues in Occupational Health at the Human Animal Interface	<u>Didactic Opportunity</u> : ENVH 539. Session 9. Occupational Health Connections. Read chapter in Human-Animal Medicine on Occupational Health of Workers. <u>Assessment Opportunity</u> : ENVH 586. Student seminar presentation sessions: students take turns discussing different occupational hazards of animal workers and make recommendations for preventive programs. Students are expected to write up of a sketch for an occupational health program to address a particular health hazard. Session 10: Occupational Health and Safety in markets and farms.
5. Evaluate the relevance of the human-animal-nature bond when addressing environmental public health challenges.	ENV H 539: One Health: Human and Animal Health in a Changing Environment	<u>Didactic Opportunity</u> : Session 12. Lecture: Intro to the human animal bond, Session 13: Lecture: Service and therapy animals, Session 14: Lecture: compassion fatigue. <u>Assessment Opportunity</u> : Final. Question 4 biophilia, question 5 service animals.
6. Analyze agriculture and food systems related public health issues from human, animal, and environmental health perspectives.	ENV H 539: One Health: Human and Animal Health in a Changing Environment	<u>Didactic Opportunity</u> : Session 15. Lecture on animal agriculture, Session 16 lecture on food systems. <u>Assessment Opportunity</u> : Final. Short essay question on beef production food systems and the One Health approach.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
7. Develop plans to optimize biodiversity at the human, animal, and environmental levels as part of a solution to an environmental public health challenge, and identify appropriate metrics to evaluate outcomes.	ENV H 539: One Health: Human and Animal Health in a Changing Environment	<u>Didactic Opportunity:</u> Session 17. Lecture biodiversity and health, Session 18: Biodiversity and conservation medicine in New Guinea. <u>Assessment Opportunity:</u> Final. Question 2: biodiversity and dilution effect, question 26 short essay about New Guinea biodiversity threats.
8. Apply the COHERE (Checklist for One Health Epidemiological Reporting of Evidence) guidelines to determine whether research meets the definition of a One Health study and, if so, to evaluate the quality of the One Health methodology used.	ENV H 586: Current Issues in Occupational Health at the Human Animal Interface	<u>Didactic Opportunity:</u> Session 1 lecture. The COHERE guidelines, critical reading of literature. <u>Assessment Opportunity:</u> Weekly student presentations on different topics using the COHERE guidelines to critique literature. Example Session 7: Read paper on respiratory protection in poultry workers and critique using COHERE during preclass (online) and in-class discussion.

Assessment of Competencies for MPH: Epidemiology: General		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Identify datasets and data management needs for a public health problem that can be addressed through an epidemiologic approach. Use statistical code or other programming software to prepare a data file for analyses.	EPI 514: Application of Epidemiologic Methods	<u>Didactic Opportunity:</u> Weeks 3, 4. Lectures on data management, merging datasets, and cleaning data. Examples are presented using R and Stata. □ <u>Assessment Opportunity:</u> Week 4. Students work in groups to produce a data management plan for an epidemiologic analysis of Behavioral Risk Factors Surveillance System data using R or Stata statistical software. Student groups submit a proposal that is evaluated by a faculty preceptor. The proposal is submitted and graded as a group and the faculty preceptor provides individual feedback regarding each student's contribution. □

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
2. Define and calculate measures of occurrence and association for exposures and health outcomes, and evaluate modification of associations between exposures and health outcomes by other factors.	EPI 514: Application of Epidemiologic Methods	<u>Didactic Opportunity:</u> Week 3. Lecture on effect modification focuses on the calculation of effect estimates in the presence of effect modification. □ <u>Assessment Opportunity:</u> Week 10. Students conduct and report an epidemiologic analysis of Behavioral Risk Factors Surveillance System data that includes calculation of measures of occurrence and association for exposures and health outcomes, including evaluations of effect modification and conduct of stratified analyses. The group submits a written report of the analyses that is graded as a group and the faculty preceptor provides individual feedback regarding each student's contribution.
3. Present results from an epidemiologic analysis addressing a public health problem that is appropriate to an audience of public health professionals.	EPI 514: Application of Epidemiologic Methods	<u>Didactic Opportunity:</u> Week 9. Lecture on presenting posters and papers to a public health audience. □ <u>Assessment Opportunity:</u> Week 10. Students present the results of their analysis in a format similar to a presentation at a conference for public health professionals. The group presentation is assessed by faculty and each student presents a self-evaluation that is reviewed by faculty. □
4. Interpret results of multiple types of epidemiologic studies in terms how they inform public health practice, and identify potential sources of bias and how they can affect the interpretation of epidemiologic findings.	EPI 513: Epidemiologic Methods II	<u>Didactic Opportunity:</u> Week 1-10. Lectures and readings focus on how to interpret evidence from ecological studies, cross-sectional studies, case-control studies, cohort studies, randomized trials, and quasi-experimental studies to inform public health practice. Potential sources of bias are addressed, including confounding, selection bias, and information bias. □ <u>Assessment Opportunity:</u> Weeks 1-10. Problem sets 1 (ecological studies), 2 (cross-sectional studies), 3, 4 (case-control studies), 5, 6 (cohort studies), 7, 8 (randomized trials). Midterm, final. (Problem sets assessed by teaching assistants; exams assessed by faculty.)
5. Describe role of quantitative epidemiologic methods in an outbreak investigation.	EPI 513: Epidemiologic Methods II	<u>Didactic Opportunity:</u> Week 6. Lecture and readings focus on the steps in an outbreak investigation and how epidemiologic methods can be applied in an outbreak investigation. □ <u>Assessment Opportunity:</u> Week 11. The final includes questions related to the use of quantitative data in an outbreak investigation.

Assessment of Competencies for MPH: Epidemiology: Global Health

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Critically analyze a leading global health challenge for which there are multiple perspectives on how it should addressed. Provide background on the health challenge and present arguments for and against multiple approaches for how the challenge could be addressed.	G H 511: Problems in Global Health	<u>Didactic Opportunity:</u> Weeks 1-3. Lectures and readings focus on the identification of leading global health challenges, analysis of the relevant context, and development of approaches to address these challenges. □ <u>Assessment Opportunity:</u> Week 7. Students write and submit a critical analysis paper that includes a description of a global health challenge, relevant background, and an outline of different approaches to address the challenge, as well as an assessment of arguments for and against each approach. Assessed individually.
2. Present an argument supporting a specific approach to address an important global health topic that is directed towards key decision-makers.	G H 511: Problems in Global Health	<u>Didactic Opportunity:</u> Week 4. Lectures and readings focus on presenting effective arguments directed at relevant decision-makers in support of specific approaches to address global health challenges. □ <u>Assessment Opportunity:</u> Week 5. Students write and submit a position statement directed towards relevant decision-makers that advocate for a specific position regarding a global health topic. Assessed individually.
3. Identify and critically evaluate specific gaps in the response to a global health challenge.	G H 511: Problems in Global Health	<u>Didactic Opportunity:</u> Week 2. Lectures and readings focus on determinants of health and how to conduct a gap analysis of the health system response to determinants of health. □ <u>Assessment Opportunity:</u> Week 5. Students work in groups to conduct a gap analysis related to the health systems response to HIV, TB, or malaria, or to social determinants of health. The gap analysis is presented to the class in an oral presentation and included in written form in the final report. The gap analysis is submitted and graded as a group and faculty provide individual feedback regarding each students contribution.
4. Develop and justify a functional budget for a health system response to a global health need.	G H 511: Problems in Global Health	<u>Didactic Opportunity:</u> Week 6. All lecture focuses on how to develop a budget that could be included in a proposal for a health system approach to address gaps in health. □ <u>Assessment Opportunity:</u> Week 8. Students work in groups to develop a budget for a proposed health system intervention, strategy, or initiative. The budget is presented to the class in an oral presentation and included in the final report. The budget is submitted and graded as a group and faculty provide individual feedback regarding each students contribution.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Develop a proposal for implementation of a specific policy or health system approach to address a leading global health challenge.	G H 511: Problems in Global Health	<u>Didactic Opportunity:</u> Week 6-8. Lectures and readings focus on the role of health care and public health systems, international agencies, and non-governmental organizations in global health, and approaches to achieving improved population health through these systems. □ <u>Assessment Opportunity:</u> Week 11. Students work in groups to develop a specific policy, intervention, and health system implementation in response to HIV, TB, or malaria, or to address specific social determinants of health. A written proposal is submitted and an oral presentation is made to the class. The proposal is submitted and graded as a group and faculty provide individual feedback regarding each students contribution.
Assessment of Competencies for MPH: Epidemiology: Maternal and Child Health		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Describe maternal and child public health problems using epidemiological data and rigorous epidemiologic analytic methods applicable to maternal and child health research.	EPI 521: Epidemiology of Maternal and Child Health Problems	<u>Didactic Opportunity:</u> Weeks 1, 2, 3, 4. Lectures and readings on perinatal and reproductive epidemiology, maternal and child nutritional epidemiology, and, perinatal pharmacoepidemiology. □ <u>Assessment Opportunity:</u> Week 5. Students complete a midterm that consists of multiple choice and short response questions that demonstrates their skill to describe maternal and child public health problems using epidemiological data and epidemiologic analytic methods.
2. Identify and evaluate the relative contribution of biologic, lifestyle, socio-demographic, and environmental factors associated with maternal and child health problems.	EPI 521: Epidemiology of Maternal and Child Health Problems	<u>Didactic Opportunity:</u> Weeks 3, 4, 6. Lectures and readings on "Lifestyle factors in maternal and child health," "Impact of environmental exposures on maternal and child health," and "Social determinants of health, MCH context." <u>Assessment Opportunity:</u> Week 5. Students complete a midterm that consists of multiple choice and short response questions based on biologic, lifestyle, socio-demographic, and environmental factors associated with maternal and child health problems.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
3. Apply evidence-based knowledge to the design and evaluation of preventative programs and policies that impact maternal and child health.	EPI 521: Epidemiology of Maternal and Child Health Problems EPI 592: Program Seminars	EPI 521 <u>Didactic Opportunity:</u> Weeks 1, 2. Lecture and readings on "Study Designs in MCH" and "Causal inference in MCH." <u>Assessment Opportunity:</u> Week 5. Students complete a midterm that consists of multiple choice and short response questions on design of preventive programs that impact maternal and child health. EPI 592 <u>Didactic Opportunity:</u> Week 7. Lecture and reading on "Maternal and child health promotion and project evaluation," "Child Profile-Washington State," and "Screening for antenatal depression-policy issues." <u>Assessment Opportunity:</u> Week 10. In an individual homework assignment, students write an essay on origins, rationale, and consequences of a policy issue that impacts maternal and child health (including policies related to health insurance coverage, perinatal care, maternal and infant mortality, child nutrition, mental health, and substance use disorders).
4. 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.	EPI 521: Epidemiology of Maternal and Child Health Problems	<u>Didactic Opportunity:</u> Week 3, 4, 6, 8. In-class article critique discussion. Reading "Migraine headaches and preeclampsia: an epidemiologic review" by Adeney et al. 2006. □ <u>Assessment Opportunity:</u> Week 5. Midterm. Students submit an article critique of an assigned article reporting an epidemiologic study on a maternal and child health issue, interpreting the results, identifying strengths and limitations. They will use an article critique outline that is provided in class. Week 10. Final Paper. Students will work on a report on a maternal and child health topic, summarizing current knowledge and making recommendations from an epidemiologic perspective. Week 10. Students give an in-class presentation of their term paper (described above).

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Acquire maternal and child health (MCH) leadership-related knowledge and skill sets, including MCH knowledge base/context, self-reflection, ethics, critical thinking, communication, negotiation and conflict resolution, cultural competency, family-professional partnerships, developing others through teaching, coaching, and mentoring, interdisciplinary/interprofessional team building, working with communities and systems, and policy.	EPI 592: Program Seminars	<p><u>Didactic Opportunity</u>: Weeks 1, 2, 3, 4, 5. Lectures and related readings. Students complete the MCH Navigator MCH20/20 Microlearning Program's (of the National Center for Education in Maternal and Child Health, Georgetown University) MCH Leadership Competency Training. □</p> <p><u>Assessment Opportunity</u>: Week 5. Student's complete the self-assessment of the Self-Reflective Learning: Map Your Learning Pathway of the MCH Navigator (of the National Center for Education in Maternal and Child Health, Georgetown University). The self-assessment will evaluate the MCH leadership competencies and results of the self-assessment will be reviewed by faculty. Depending on the results, individualized development plans will be discussed with students accordingly.</p>

Assessment of Competencies for MPH: Global Health, General		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Review and report the most common causes of morbidity and mortality globally; how they are measured; how they differ by age, sex, race, social class, and geography; and how they have evolved over the past century in different social, political, and economic settings.	G H 511: Problems in Global Health	<p><u>Didactic Opportunity</u>: Week 2. Lectures and discussion on global burden of disease. Readings: Birn et al. Textbook of Global Health Ch 6, Epidemiologic Profiles of Global Health & Disease.</p> <p><u>Assessment Opportunity</u>: Asst 4: Disease burden review paper, Week 2. Each student submits a written review reporting one country's disease burden (age-and sex-specific-mortality rates, life expectancy, DALYs); within-country differences by race, social class, and geography; and the evolution of this country's metrics over the past 50-100 years.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Summarize and reflect on the major social determinants of health that affect social well-being, poverty, and health, globally, including the relative roles of education, family income, nutrition, housing, water, sanitation, health care, colonialism, neoliberalism, conflict, racism, and inequality.	G H 511: Problems in Global Health	<u>Didactic Opportunity</u> : Week 1-2. Lecture and discussion: Social Determinants of Health. Readings: Birn, et al. Chapter 8, Health Equity & the Societal Determinants of Health□ <u>Assessment opportunity</u> : Asst 5: Social Determinants of Health review paper, Week 3. Each student participates in a group discussion of their assigned country's social determinants of health and how and why these have changed since the 1950s. After class, each student submits a summary of their group's discussion and their personal reflections on the major social determinants of health and their underpinnings; this summary is graded by the instructor.
3. Analyze the role of health institutions, including government agencies, non-governmental organizations, and global donors; their ideologies, agendas, power dynamics, and policy frameworks; and the evolution of their responses to global health issues since the mid-20th century.	G H 511: Problems in Global Health	<u>Didactic Opportunity</u> : Weeks 4, 5. Three sessions of lectures and discussion on International Health Agencies: 1. bilaterals, 2. multilaterals/foundations, and 3. NGOs. Readings: Birn et al, Chapter 4:Global Health Actors and Activities. <u>Assessment opportunity</u> : Asst 6: International agencies reflection paper, Week 5. Each student participates in a small group discussion (5-6 students) of institutional responses to health issues in a different assigned country and the ideological and political dimensions of that evolution. After class, each student submits an analysis of the role of institutions and global health initiatives in shaping response to global health issues within the assigned country; this analysis is graded by the instructor.
4. Design and present a comprehensive proposal to address the major health issues in selected countries, including gap analyses, logical frameworks, budgets, and evaluation frameworks.	G H 511: Problems in Global Health	<u>Didactic Opportunity</u> : Lecture discussions on weeks 1 (Intro), 2 (Gap analysis), 3 (Group work dynamics), 5 (Gap presentations), 6 (Budgets), 8 (budget presentations), 9-10 (final presentations). □ <u>Assessment opportunity</u> : Group Project: Students work in groups to design a comprehensive proposal to improve either social determinants of health and/or selected health systems performance in a selected country. They are assessed and graded, by group and individually, at the following stages of their presentations: gap analysis, budget, final, and of their written product. Students in each group also do peer and self-evaluations.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Describe a global health research project or program evaluation, and present the rationale, goals, and appropriate methods for its successful implementation.	G H 532: Responsible Conduct of Research: Global and Local or G H 531: Research and Evaluation Methods in Global Health	<p>G H 532 <u>Didactic Opportunity</u>: Week 1. Three presentations covering research proposal writing basics (Specific Aims, Hypotheses, Significance, Innovation, Approach). <u>Assessment Opportunity</u>: Week 2: At the end of the course, each student presents their research study and describes the project goals, rationale, innovations, and research methods for implementation.</p> <p>G H 531 <u>Didactic Opportunity</u>: Week 1. Two presentations covering program evaluation basics (Goal/SMART objectives, program indicators, data collection methods, data quality, evaluation questions). <u>Assessment Opportunity</u>: Week 10: At the end of the course, each student presents their program evaluation plan and describes the evaluation questions, mixed evaluation methods, indicators/measures, data collection, analysis, and stakeholder engagement.</p>
6. Reflect upon issues of power, privilege, inequity, and social justice, discuss how racism, colonialism and other structural inequities impact global health policy and practice.	GH 593: MPH Workshop	<p><u>Didactic Opportunity</u>: Week 1 Session: "Introduction to power, privilege, inequity and social justice in global health." <u>Assessment Opportunity</u>: Each student submits an editorial reflecting on power, privilege, inequity, and social justice, and discusses how racism, colonialism, and other structural inequities impact work in global health.</p>

Assessment of Competencies for MPH: Global Health: Health Metrics and Evaluation

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Describe the rationale and the conceptual and historical basis of population health measurement.	G H 539: Methods, Data, and Tools in Global Health	<u>Didactic Opportunity</u> : Day 1. Presentation: Overview of population health concepts, measurements, indicators, and principles. <u>Assessment Opportunity</u> : Day 1 (final session): Students describe the rationale, conceptual basis, and changes in global health measurement over time (graded presentation).
2. Compare the main sources of data on population health and health system performance, and discuss their strengths and weaknesses.	G H 592: HME Track Seminar	<u>Didactic Opportunity</u> : Week 1. Presentation: Analytic approach to data sources used in the scientific literature. □ <u>Assessment Opportunity</u> : Weeks 2-9. Students present a journal article, identify and compare the data sources used, and discuss strengths and weaknesses of each data source (graded presentation).
3. Define and discuss key metrics from the Global Burden of Disease project, including years of life lost, years lived with disability, disability-adjusted life years, and health care utilization measures.	G H 590: Global Burden of Disease	<u>Didactic Opportunity</u> : Day 4/Session 1. Presentation: Global Burden of Disease metrics; reading: "Global, regional, and national disability-adjusted life years for 359 diseases and injuries and healthy life expectancy for 195 countries and territories, 1990-2017: A systematic analysis for the Global Burden of Disease Study 2017" □ <u>Assessment Opportunity</u> : Day 8/Final Session. Each student selects a specific cause of death and disease burden and correctly applies different metrics to assess its magnitude, impact, and variability around the globe (graded presentation).
4. Analyze the gaps in our empirical understanding of a given driver of health and propose an evidence-based and innovative solution to reduce its impact.	GH 539: Methods, Data, and Tools in Global Health	<u>Didactic Opportunity</u> : Day 5. Presentation: Forecasting overviews, methods, and results. <u>Assessment Opportunity</u> : Day 5 (final session). Students present an analysis of gaps in evidence regarding a driver of health of their choice and their proposed intervention (grade presentation).
5. Explain and critique the complex quantitative methods used in the assessment of burden of disease, disease trends, and disparities across different groups, times, and locations.	G H 592: HME Track Seminar	<u>Didactic Opportunity</u> : Weeks 2-9. Presentation: Student-led presentation of journal article analyzing disease trends, with guest faculty participation. <u>Assessment Opportunity</u> : Weeks 2-9. Pre-class: Each student posts to a blog explaining and critiquing the methods used in each article (graded); In class: student presenter explains and critiques the methods used in the selected journal article (graded).

The Health Services Department maintains a policy for the MPH: **Health Services: General** degree. This policy can be found in the Electronic Resource files: Electronic Resource File\Criterion_D\1. MPH D1-7\D4.3\D4.3 State-supported Syllabi\D4.3_HSERV_GeneralistDegreePolicy.

The policy includes five simple steps for each student to follow, with guidance from their academic and program advisors (both faculty and staff). Each student builds a plan of study and, with the support of advisors, determines tailored competencies to their area of study within Health Services. Five sample matrices are included within the Data Templates: Electronic Resource File\Other required materials\Data Templates, see Tab: D4-1 HSERV.

Assessment of Competencies for MPH: Health Services: Health Systems and Policy		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Develop and effectively communicate key aspects of public health and health care system policy positions to both lay and professional audiences.	HSERV 552: Health Policy Development	<p><u>Didactic Opportunity</u>: Week 6. Persuasive Communication. Conger, JA. 1998. "The Necessary Art of Persuasion." Harvard Business Review. May-June. The Women's and Children's Health Policy Center, Johns Hopkins University. Writing Policy Briefs: A Guide to Translating Science and Engaging Stakeholders. □</p> <p><u>Assessment Opportunity</u>: Week 7. Each student chooses a health-related policy issue and an "outlet," which could be a newspaper, magazine, blog, e-zine, etc, and writes an op-ed on that issue; the op-eds should convincingly state the nature of the problem, why the audience [who does the "outlet" target?] should care about it, and include some action that could help resolve the issue. It should incorporate empirical evidence to support the importance of the issue and the appropriateness of the proposed action to address it. It should also discuss key stakeholders and important aspects of the context within which this issue exists. □</p>
2. Apply health services research methods to a health policy issue	HSERV 513: Health Policy Research	<p><u>Didactic Opportunity</u>: Week 1-2. Readings include: Craig P, Katikireddi SV, Leyland A, Popham F. Natural Experiments: An Overview of Methods, Approaches, and Contributions to Public Health Intervention Research. Annu Rev Public Health. 2017 Mar 20;38:39-56.</p> <p><u>Assessment Opportunity</u>: Week 10. Students develop their own study designs for a health policy question of their choosing and discuss how the presentation of research findings impacts the likelihood that study results will impact public policy. This competency is assessed through an individual essay. The instructor evaluates on the following criteria: Does the students identify the specific challenges in designing a research project to inform a policy of their choosing; Does the student understand the statistical issues that must be confronted to ensure that potential sources of bias are addressed in the design and conduct of the research, and; Is there a dissemination plan that will increase the likelihood that this research will inform public policy.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
3. Analyze a health policy issue, and describe and compare policy options, as part of a multidisciplinary and multi-cultural group.	HSERV 552: Health Policy Development	<p><u>Didactic Opportunity</u>: Weeks 1-6. Week 3 focuses on developing policy options and hones in on an example through a problem-based learning exercise. □</p> <p><u>Assessment Opportunity</u>: Week 11. Engage in a quarter-long four-person group project beginning in Week 2 to discuss, research, analyze, and make recommendations on a health policy issue assigned by a state agency or local nonprofit organization. The course project paper and presentation summarize each group's analysis of the issue and policy options and recommendations, and a policy brief is required as part of the final submission to demonstrate their ability to synthesize large amounts of information succinctly and communicate persuasively. Students are graded based on the quality of the oral and written products, the entire group gets one grade for their project, but their class participation grades are assessed based in part on a peer evaluation. □</p>
4. Analyze how different stakeholders contribute to the cost of the U.S. health care sector and describe how the costs associated/ experienced by specific stakeholders will be impacted by health policy.	HSERV 512: Health Systems and Policy	<p><u>Didactic Opportunity</u>: Week 4. Readings: 1. Chen A and D Goldman. Health Care Spending: Historical Trends and New Directions. Annu. Rev. Econ. 2016. 8:291–319. doi: 10.1146/annurev-economics-080315-015317. 2. Agarwal, R, O Mazurenko, and N Menachemi. High Deductible Health Plans Reduce Health Care Cost and Utilization, Including Use of Needed Preventive Services. Health Affairs. 2017;36(10):1762-1768. 3. Emanuel, E. The Real Cost of the US Health Care System (Editorial). JAMA. 2018;319(10):983-985. 4. Anderson, G., Reinhardt, U. et al. It's the Prices Stupid: Why the United States Is So Different From Other Countries. 2003. Health Affairs.</p> <p><u>Assessment Opportunity</u>: Week 7. Cost Paper: health care reform has been a central talking point on the Democratic campaign trail. While the promise of universal health coverage is newsworthy, there has been less focus on how these plans will impact the cost of the U.S. health care system and key stakeholders within it. In small groups of 4-5, you will review one of the health care proposals from the list of candidates: Senator Bernie Sanders (Single payer); Senator Kamala Harris (Medicare & Medicare Advantage like plans); Former Vice President Joe Biden (Public Option). Objectively answer: What are the merits of this approach to insurance coverage for the US? What are the gaps in understanding how this plan will actually work to provide insurance and access to health care services? As it relates to national health care costs: what are the strengths, weaknesses, and gaps of the plan? How does your candidates plan aim to bend the cost curve? Is there evidence that it will lower national health care spending if implemented? Also pick 4 -5 (one per person) of the stakeholders from the list below and discuss in greater detail how your candidate's plan will impact the costs associated/experienced by those groups: Medicare; Medicaid; Hospitals (including physicians); Pharmaceuticals; Health Insurers (carriers); Patients. Students complete both a paper and presentation.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Apply basic principles of economics, law, and ethics to analyze a complex health policy question. □	HSMGMT 514: Health Economics	<p><u>Didactic Opportunity</u>: Weeks 6-7. The course reviews the impact that macroeconomic fiscal and monetary policy has on the key social determinants of health, including the distribution of wealth, unemployment, and access to opportunity, which is followed by an assessment of how decision analytic tools may be used to assess the relative impact of health policy on different segments of society. □</p> <p><u>Assessment Opportunity</u>: Week 5. Students complete an essay that identifies a health economic question, selected in consultation with the instructor, and demonstrates how economic theory either explains a specific aspect of consumer behavior or may be used to develop a predictive model to forecast expected behavior. The competency is then additionally assessed through a final exam administered in week 10 of the quarter in which the students make a case for the relative impact of demand or supply side factors as the basis for the American health economy to achieve such poor outcomes despite its relative high costs.</p>
Assessment of Competencies for MPH: Health Services: Social and Behavioral Sciences		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health research and practice.	HSERV 526: Advanced Qualitative Methods (course currently undergoing revision)	<p><u>Didactic Opportunity</u>: Week 6-7. Lectures on Content vs. Thematic Analysis, Creating a Codebook, and Inter-Coder Reliability. Textbook chapters 10-11 in Strauss and Corbin, "Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory."</p> <p><u>Assessment Opportunity</u>: Week 11. Students develop and implement a coding strategy for pre-existing qualitative data, and write a research report describing their methods and results.</p>
2. Describe and critically evaluate health communication campaigns, including campaign goals, theoretical foundation, formative research, message strategies, and evaluation. □	HSERV 507: Health Communication and Marketing for Health Promotion: Theory and Practice	<p><u>Didactic Opportunity</u>: Students will choose one of the 20 case studies listed in the reading list, each of which is a published article describing the development and implementation of a health communication campaign.</p> <p><u>Assessment Opportunity</u>: Students will individually prepare to give a 7-minute presentation and facilitate a 3-minute discussion about their overview and critique of the development process of the health communication campaign from their case study.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
3. Identify, describe, and apply theories across the levels of the socioecological model.	HSERV 581: Strategies of Health Promotion	<p><u>Didactic Opportunity</u>: Lectures in weeks 3, 5-8 introduce theory and how to work with theories (Week 3) and then specific theories and applications of theory to health promotion interventions (Weeks 5-8). □</p> <p><u>Assessment Opportunity</u>: Assignment 2a; this is the first draft of a grant proposal covering design and implementation of a health promotion intervention. Students must identify, describe, and apply one or two theories to design the health promotion intervention in this assignment. Students receive detailed written feedback on this assignment, including the appropriateness of the theory(s) they select and the clarity with which they apply it to their health promotion intervention design.</p>
4. Apply evidence-based evaluation frameworks with qualitative, quantitative, and mixed-methods approaches in the evaluation of social and behavioral science interventions.	HSERV 522: Health Program Evaluation	<p><u>Didactic Opportunity</u>: Lectures in weeks 4-6 on quantitative, qualitative, and mixed methods approaches to evaluation, and on evidence-based frameworks for developing evaluation questions and designs.</p> <p><u>Assessment Opportunity</u>: Evaluation critique paper due at start of Week 7, individual assignment. Students are given a short list of published impact evaluations and asked to choose one to read and summarize both the framework used (or lack thereof) in developing the evaluation, and the quantitative and/or qualitative approaches used to collect and interpret data to describe and assess the impact of a program or intervention on a population's health; and discuss how other choices in these domains might have improved the validity and usefulness of the evaluation findings.</p>
5. Apply insights from community needs and strengths, evidence-based interventions, and relevant theories to the design of health promotion interventions.	HSERV 581: Strategies of Health Promotion	<p><u>Didactic Opportunity</u>: Lectures and discussions in Weeks 1-2 (gathering qualitative and quantitative data to assess community needs and strengths), 3 (applying theory and evidence), and Weeks 5-8 (specific theories and their application).</p> <p><u>Assessment Opportunity</u>: Oral presentation. Students present their culminating assignment (assignment 2b) to the class. This includes presenting information about how the intervention they designed is responsive to community needs and strengths, the evidence they used from prior relevant intervention work, and the theory(s) they applied to their intervention. Students are assessed both as a team and receive individual feedback from the instructor.</p>

Assessment of Competencies for MPH: Public Health Nutrition		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Apply knowledge of human nutrient requirements in relation to genetics, metabolic pathways, and physiological function across the life course.	NUTR 520: Nutrition and Metabolism I	<p><u>Didactic Opportunity:</u> Weeks 2-10. Lectures on macronutrient metabolism, including metabolic pathways, physiological processing, genetic influences, and health outcomes.</p> <p><u>Assessment Opportunity:</u> Weeks 4, 8, 11. Exams are completed for each macronutrient (proteins-week 4, carbohydrates-week 8, lipids-week 11). Questions ask students to apply knowledge gained related to metabolic disorders, genetic influences, and physiological processing across the life course. For example: Proteins: questions regarding changes in protein metabolism in fed and fasted states; protein recommendations during aging; issues with protein metabolism and dietary implications of monogenic disorders such as phenylketonuria (PKU). Carbohydrates: questions regarding changes in carbohydrate metabolism in fed and fasted states; how insulin resistance, type 1 diabetes, and type 2 diabetes lead to changes in blood glucose regulation, and what are the dietary and nutritional implications of being afflicted with those disorders, specifically as related to carbohydrate metabolism. Lipids: questions regarding lipid metabolism in fed and fasted states; issues regarding genetic disorders that affect lipid metabolism (familial hypercholesterolemia), and the roles proposed for lipids in cardiovascular and neurodegenerative diseases.</p>
2. Assess nutritional status of individuals and groups.	<p>NUTR 531: Public Health Nutrition</p> <p>NUTR 562: Nutrition and Chronic Disease</p> <p>NUTR 521: Nutrition and Metabolism II</p>	<p>NUTR 531</p> <p><u>Didactic Opportunity:</u> Week 5. Readings and lecture on assessment of diet in population groups.</p> <p><u>Assessment Opportunity:</u> Week 5. Students complete a question set about appropriateness of various tools for the assessment of diet in population groups.</p> <p>NUTR 562</p> <p><u>Didactic Opportunity:</u> Weeks 2-10. Students prepare for each in-class discussion by reading textbook chapters and articles that include nutritional assessment for specific chronic diseases in individuals.</p> <p><u>Assessment Opportunity:</u> Week 11. Students are assessed individually on exam questions that ask for detailed application of knowledge, including assessment of nutritional status. For example: In assessing the nutritional status of a patient with chronic kidney disease (CKD), the following symptoms may be present: anorexia, nausea/vomiting, 4kg weight gain in two weeks, progressive shortness of breath, muscle cramps, edema in extremities. Briefly explain why each symptom would be present.</p> <p>NUTR 521</p> <p><u>Didactic Opportunity:</u> Weeks 1-10. Each week covers different topics on micronutrients and the textbook includes and assessment section for each nutrient.</p> <p><u>Assessment Opportunity:</u> Three exams are given (weeks 3, 7, 11). Exam questions ask for details on application of knowledge, including discussion on nutrition assessment in individuals.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
3. Appraise how nutritional factors across the lifespan are linked to non-communicable diseases (NCD) and quality of life.	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Weeks 2-10. Readings and lectures throughout the quarter explore how nutritional factors are associated with chronic disease states (NCDs) and quality of life. For example, in Week 2, students prepare for in-class discussion by reading one of these articles: *Zhong VW et al. Associations of dietary cholesterol or egg consumption with incident cardiovascular disease and mortality. JAMA 2019; 32(11): 1081-1095. *Dehghan M et al. Associations of fat and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents: A prospective cohort study. Lancet 2017; 390: 2050-2062. *Zhuang P et al. Dietary fats in relation to total and cause-specific mortality in a prospective cohort of 521 120 individuals with 16 years of follow-up. Circ Res 2019.</p> <p><u>Assessment Opportunity:</u> Week 2. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment. For example: Following class discussion on the three articles, write a brief reflection on how the nutritional factors discussed today are linked to cardiovascular disease and quality of life.</p>
4. Explain, critique, and apply the process of public health practice and nutrition policy development.	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity:</u> Week 1. Lecture on public health frameworks for decreasing disease burdens. Week 3. Lecture on science-to-policy process. Readings and lectures discuss policy development and public health practice.</p> <p><u>Assessment Opportunity:</u> Week 10. Students prepare and submit a paper that describes and explains a public health issue and proposes a public health policy solution for the issue as a way of applying the process of public health practice. The paper includes a critical literature review, identifying a potential policy solution, and making an assessment of the current policy feasibility as an application of the process of nutrition policy development.</p>
5. Describe the basic components and determinants of the US food and nutrition systems.	NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	<p><u>Didactic Opportunity:</u> Week 1-10. To prepare for class discussions, students read current and popular books about food system components and determinants, from food production and access to consumption and waste (i.e., Fast Food Nation and Eating Animals)</p> <p><u>Assessment Opportunity:</u> Weeks 2-10. Every student has the opportunity to facilitate discussions in teams, and submit pre- and post-discussion reflections analyzing key social, political, and economic factors influencing food systems components and other determinants of the food and nutrition systems in the U.S. Instructor assesses individual student reflections based on a reflection rubric that is given to students at the outset of the class.</p>

Assessment of Competencies for MPH: Public Health Genetics		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Evaluate evidence for interactions among genes, environmental factors, and behaviors, and their roles in health and disease.	PHG 511: Genetic Epidemiology	<p><u>Didactic Opportunity</u>: Week 6. Lectures and reading on gene x environment interactions. Readings include: "Gene-environment interactions for complex traits: definitions, methodological requirements and challenges." And "Update on the State of the Science for Analytical Methods for Gene-Environment Interactions."□</p> <p><u>Assessment Opportunity</u>: Week 10. Final part 1: Conduct a genome-wide gene-environment interaction study using a real data example. Report results for most strongly observed interactions and evaluate the results, especially evidence in support of a significant Gene-environment interaction.□</p>
2. Compute statistical analyses investigating the association between genetic variation and health outcomes.	PHG 511: Genetic Epidemiology	<p><u>Didactic Opportunity</u>: Week 4. Lecture on genetic associations and readings. Readings include "Genome-wide association studies for complex traits: consensus, uncertainty and challenges." and "From genome-wide associations to candidate causal variants by statistical fine-mapping"□</p> <p><u>Assessment Opportunity</u>: Weeks 6 and 7. Homework 3. Students compute statistical analysis investigating the association between genetic variation and macular degeneration.□</p>
3. Apply a public health policy framework to evaluate policy options in applications of genomic knowledge and technologies for disease prevention, screening, diagnosis, and/or treatment.	PHG 512: Legal, Ethical, and Social Issues in Public Health Genetics	<p><u>Didactic Opportunity</u>: Week 4. Lecture on policy frameworks and assigned readings relevant to the evaluation of applications of genomic knowledge and technologies in public health: 1. Wilfond BS, Thomson EJ. Models of public health genetic policy development. In Genetics and Public Health in the 21st Century (Khoury MJ, Burke W and Thomson EJ eds) New York: Oxford University Press (2000), and 2. first two domains of "CDC Policy Process: Problem Identification and Policy Analysis" https://www.cdc.gov/policy/polaris/policyprocess.□</p> <p><u>Assessment Opportunity</u>: Graded written assignment to select a controversial topic related to the application of genomics knowledge and technologies in public health, and apply a public health policy framework, which is graded to ensure inclusion of the following components: definition of the policy issue, including who is affected and with what consequences; a suggested policy solution; stakeholder identification; and articulation of pro and con positions for suggested policy solution.</p>
4. Apply quantitative methods to assess ethical questions.	PHG 527: Social Science Research Methods	<p><u>Didactic Opportunity</u>: Week 5. Lectures: quantitative methods. Reading: Aday. L. and Cornelis, L Designing and conducting health surveys, San Francisco: Josey-Bass, 2006, 3rd edition. Chapters 4-7□</p> <p><u>Assessment Opportunity</u>: Assignment 2. Using the R21 or foundation grant format, submit a quantitative research proposal on a bioethics topic.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
5. Formulate a legal question and conduct legal research and analysis related to an issue arising in genetics or genomics.	PHG 523: Genetics and the Law	<p><u>Didactic Opportunity</u>: Weeks 1, 2. Lecture and readings on "Introduction to Law and Legal Writing" and "Finding and Researching Topics in Law and Genetics." Weeks 2-10 model approaches on formulating legal questions and answering them in the following topic areas: reproductive genetic screening and testing, eugenics, genetics privacy, newborn screening, genetics and insurance discrimination, genetics and employment discrimination, parentage, genetics in the courtroom, evidentiary rules, expert witnesses, post conviction DNA testing, commercialization, ownership, and global governance of gene editing. □</p> <p><u>Assessment Opportunity</u>: Weeks 2, 4, 8, 10. Students formulate a legal question and conduct legal research and analysis on a genetics or genomics topic of their choice through research and drafting of Legal Research Memorandum in four stages (topics, prospectus, optional draft submission, final memo), with instructor feedback at each stage and grading of final submission.</p>

Fee-based programs

Assessment of Competencies for MPH: Health Services: Community-Oriented Public Health Practice		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Mobilize communities to challenge health inequities and make effective systems change by catalyzing grassroots public health initiatives.	HSERV 531: COPHP Population Health and Community Development HSERV 533: COPHP Quantitative Methods HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health HSERV 537: COPHP Health Policy HSERV 538: COPHP Evaluation Design and Community Organizing HSERV 540: COPHP Management and Leadership	<p>HSERV 537</p> <p><u>Didactic Opportunity</u>: Week 7. In seminar, Victoria Adela Breckwich Vásquez, DrPH, MPH, MA, speaks to the disproportionate effects of COVID-19 on Black and Brown communities, and how communities are mobilizing through labor unions, through social media, and through street demonstrations to counter the drivers of these inequitable factors.</p> <p><u>Assessment Opportunity</u>: Weeks 7-10. In the final case of the quarter, "Nothing to See Here," students will explore how our county health department decided to declare racism as a public health emergency, and how communities are mobilizing around this issue. Students explore the actions of grass-roots organizers, the city council, the mayor's office, the health department, and the Seattle Police Department as factors in "community mobilization."</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Skillfully and confidently practice systematic problem-solving approaches to resolve complex public health challenges.	HSERV 531: CPHP Population Health and Community Development HSERV 533: CPHP Quantitative Methods HSERV 534: CPHP Health Behavior and Health Promotion and Environmental Health HSERV 537: CPHP Health Policy HSERV 538: CPHP Evaluation Design and Community Organizing HSERV 540: CPHP Management and Leadership	HSERV 540 <u>Didactic Opportunity</u> : Week 4. A seminar in week 3 is devoted to "strategic thinking and planning," with opportunities for student hands-on engagement in the planning process. <u>Assessment Opportunity</u> : Week 5. In the "Leading Change" case, students are asked to describe the elements and methods for formulating strategies, plans, and programs for an organization attempting to solve complex public health problems. They develop and communicate an organization's mission, vision, and values to motivate the organization's people and guide unit-level planning. They are asked to explain the importance of aligning organizational goals, culture, structure, reporting relationships, budgets, and reward systems. Students are assigned to write papers in response to specific learning objectives, and read each others' papers. Faculty assess these papers and grade the work based on a rubric.
3. Design, facilitate, and mediate group processes, especially in settings of competing views, to make sound and considered team-based decisions in public health, drawing out diverse perspectives to ensure all voices are heard.	HSERV 531: CPHP Population Health and Community Development HSERV 533: CPHP Quantitative Methods HSERV 534: CPHP Health Behavior and Health Promotion and Environmental Health HSERV 537: CPHP Health Policy HSERV 538: CPHP Evaluation Design and Community Organizing HSERV 540: CPHP Management and Leadership HSERV 592: Program Seminar	HSERV 531 <u>Didactic Opportunity</u> : Week 2. In first year seminar, 592C, first quarter, faculty teach small group facilitation and the factors associated with a successful meeting. <u>Assessment Opportunity</u> : Beginning week 3, students are expected to facilitate their own classes. In class, faculty observe student facilitators closely and provide feedback orally or in written format on: whether the student facilitator met their intended goals for the day; whether the learning objectives intended by faculty were met; how effectively the student utilized techniques to encourage equitable participation by all students; and how the student responded to minor and major conflicts within the group dynamic. Assignments or projects are evaluated by faculty using a rubric customized to that assignment and often involve evaluation by subject matter experts who provide oral feedback after observing the students' work. Student facilitators meet with faculty before the facilitation experience to design the agenda, and and after for feedback. There is a facilitation rubric used to assess performance.□

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
4. Consistently practice perseverance, resourcefulness, independence, and leadership in advocating for public health priorities and values, especially in adversarial environments.	HSERV 531: COPHP Population Health and Community Development HSERV 533: COPHP Quantitative Methods HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health HSERV 537: COPHP Health Policy HSERV 538: COPHP Evaluation Design and Community Organizing HSERV 540: COPHP Management and Leadership	HSERV 533 <u>Didactic Opportunity:</u> Week 6. During seminar, faculty convene a "Data and Social Justice" panel consisting of epidemiologists and data scientists who use quantitative methods to advance health equity and have been met with public resistance or structural barriers. <u>Assessment Opportunity:</u> Weeks 5-6. In the third case, "Starting Right," a community controversy is brewing about the effectiveness (and future funding) of a prenatal care program designed to improve birth outcomes in at-risk populations. With an existing set of observational data, students are asked to evaluate the program, learning about variable types, common statistical distributions, basic descriptive statistics, and two-variable (bivariate) statistical tests. Students frame study hypotheses, select statistical tests appropriate to the type of data available, analyze data using statistical software, and finally create tables, graphs, and written text to convey study results. In the final case deliverable, students are asked to advocate in a written brief for continuing the program (or not) based on public health priorities and values. Faculty assess student work and assign grades, based on a rubric.
5. Skillfully employ modern public health communications tools and techniques, to most effectively reach a variety of communities.	HSERV 531: COPHP Population Health and Community Development HSERV 533: COPHP Quantitative Methods HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health HSERV 537: COPHP Health Policy HSERV 538: COPHP Evaluation Design and Community Organizing HSERV 540: COPHP Management and Leadership HSERV 592: Program Seminar	<u>Didactic Opportunity:</u> HSERV 592C, associated with HSERV 534, a public relations specialist presents on effective communication strategies and channels. <u>Assessment Opportunity:</u> HSERV 533 case, Week 3, "To Screen or Not to Screen," students record and present a public service announcement (PSA) or social media campaign on breast cancer screening to classmates and faculty. Students provide detailed peer reviews of each others' work, using a student-developed rubric based on their own research re: best practices for health communication. Faculty also evaluate the PSAs and provide written feedback on the quality and accuracy of scientific evidence used, as well as best practices for health communication, including length of PSA, language level used, considerations for reaching those with disability or low English language proficiency, and persuasiveness of the message.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
6. Rapidly synthesize evidence for developing and evaluating public health programs.	HSERV 531: COPHP Population Health and Community Development HSERV 533: COPHP Quantitative Methods HSERV 534: COPHP Health Behavior and Health Promotion and Environmental Health HSERV 537: COPHP Health Policy HSERV 538: COPHP Evaluation Design and Community Organizing HSERV 540: COPHP Management and Leadership	HSERV 538 <u>Didactic Opportunity:</u> Week 1. Kasey Langley, MPP, conducts a seminar on best practices in conducting evaluations, and conveys the important principles to bring to engagement with community clients. She also discusses how to get started with planning for an evaluation. <u>Assessment Opportunity:</u> Weeks 1-10. Students spend the quarter designing and conducting evaluations for a real client, arranged by the faculty. During the first four weeks, students analyze the logical framework for the program to be evaluated, then form research/evaluation questions and decide on methods and identify data sources. Students write an evaluation design proposal and present it to the client. The faculty and clients provide feedback on the design proposal, and students refine their proposal in response.
Assessment of Competencies for MPH: Online Master of Public Health		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Apply quality and performance improvement concepts to analyze human resource management practices in an organization, and recommend specific actions for improvement.	HSMGMT 560: Management Practice in Healthcare and Public Health Organizations	<u>Didactic Opportunity:</u> Weeks 4-6, 8. Presentations and readings, specifically Chapters 5-8, 11 from Textbook: "Essentials of Managing Public Health Organizations" by James A. Johnson and Kimberly S. Davey. Published by Jones & Bartlett Learning. <u>Assessment Opportunity:</u> Week 9. Applied Learning Project. Students work in teams but are assessed individually as well. Each team will select an organization to analyze and make recommendations regarding quality and performance improvement of their human resource management. Teams can choose any organization, including one that is a current employer for one of the team members. Teams can choose any topic from the course: teamwork, decision making, motivation, performance management, etc. Each team member will be responsible for interviewing at least one person from the organization to understand the situation and will then create alternatives and recommendations for the organization to implement. The team will present their analysis and recommendations in a recorded presentation. Each student will also do peer evaluations of two other presentations, which are assessed by the instructor.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity"
2. Design and conduct a community outreach event to raise greater public awareness of the societal determinants of health by delivering persuasive, evidence-based arguments.	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Weeks 3, 6. Presentations and readings: "Five filters of Mass Media" by Noam Chomsky; Niederdeppe, J., C. A. Bigman, A. L. Gonzales and S. E. Gollust (2013). "Communication About Health Disparities in the Mass Media." <i>Journal of Communication</i> 63(1): 8-30. Acemoglu, D. and J. Robinson (2009). "Foundations of Societal Inequality." <i>Science</i> 326(5953): 678-679. □</p> <p><u>Assessment Opportunity:</u> Week 7. Students design and conduct a Community Outreach Event (COE) during which they discuss with a non-academic audience of their choice how social determinants such as income inequality or structural racism lead to health inequities. The content presented is based on class readings or other evidence-based resources they identify. Students submit a report after organizing the event, in which they summarize the setting, audience, content presented, and lessons learned.</p>
3. Apply equity impact tools to the design of community-level public health interventions.	HSERV 567: Strategic Leadership of Public Health Systems (<i>noted as HSERV 590 on syllabus</i>)	<p><u>Didactic Opportunity:</u> Week 6. Required readings and viewings including the King County Equity Impact Tool: https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/2016/The_Equity_Impact_Review_checklist_Mar2016.ashx?la=en Students also watch two Ted talks: 1. https://www.ted.com/talks/bryan_stevenson_we_need_to_talk_about_an_injustice; 2. https://www.ted.com/talks/deepa_narayan_7_beliefs_that_can_silence_women_and_how_to_unlearn_them.</p> <p><u>Assessment Opportunity:</u> Week 6. Each student must write a personal reflection about applying the equity impact review tool to their public health map and answer the following questions: What changed? Did you have any surprises? Did your thinking change? What were some of the unanticipated consequences? How would you like to address them in your map?</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
4. Translate research findings into a presentation for a legislative audience.	HSERV 559: Public Policy and the Public's Health	<p><u>Didactic Opportunity</u>: Weeks 6-8. Presentations and readings: Sharfstein JM. Dear health care lobbyists. Milbank Quarterly 2015; 93:15-18. doi: 10.1111/1468-0009.12099; Griffiths EP. Effective legislative advocacy- Lessons from successful medical trainee campaigns. N Engl J Med 2017;376;25:2409-2411 doi: 10.1056/NEJMp1704120; W. David Bradford and Anne Mandich. Some State Vaccination Laws Contribute To Greater Exemption Rates And Disease Outbreaks In The United States. Health Affairs, 34, no.8 (2015):1383-1390.</p> <p><u>Assessment Opportunity</u>: Week 10. Final project: Students create a presentation that defines a health policy problem and describes a policy for addressing it. The presentation should be aimed at a legislative audience. The assignment is graded using the following criteria: compelling and clear problem definition, careful review and critical appraisal of research findings (i.e., evidence), policy options considered, stakeholder identification, and the defense of the policy recommendation as the best of several alternatives.</p>
5. Apply feedback from leadership self-assessment instruments and leadership style theory to create a personal Leadership Development Plan, with clear objectives for improving leadership traits and characteristics.	HSMGMT 560: Management Practice in Healthcare and Public Health Organizations	<p><u>Didactic Opportunity</u>: Week 6. Chapters 8-9 from Textbook: "Essentials of Managing Public Health Organizations" by James A. Johnson and Kimberly S. Davey. Published by Jones & Bartlett Learning. □</p> <p><u>Assessment Opportunity</u>: Week 8. Each student will use the feedback from the various leadership self-assessment instruments to create a personal Leadership Development Plan. Students will evaluate the leadership traits and characteristics of three individuals (role model, best manager, worst manager) and compare them to their own characteristics and draw conclusions. Students will then identify three "SMART" objectives to improve their leadership traits and characteristics.</p>

- 2) **For degrees that allow students to tailor competencies at an individual level in consultation with an advisor, the school 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.**

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\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.**

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\D4.3.

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

Strength

- SPH and UW provide a depth and breadth of cross-disciplinary learning opportunities rivaled by only the largest, similarly structured “Research 1” institutions. In addition to providing a great number of dual program offerings, students pursue cross-disciplinary training within the SPH and elsewhere on the UW campus. For example, students have pursued an MPH in Nutritional Sciences, or a PhD in Nutritional Sciences, joined with a MS in Epidemiology. Students access scholars and courses across the health science schools as well as in Arts and Sciences, the School of the Environment, and the Evans School of Public Policy and Governance.

Weaknesses and Plans for improvement

It is recognized that the large number of unique concentrations can cause confusion for students at the time of application and reduce efficiency of administration. Efforts have begun to explore how best to reduce the number of degrees without loss of those concentrations most sought by students or required for specific career opportunities.

The School chose to concentrate MPH re-envisioning efforts initially on the development of the Common Core for all the state-supported programs as a first stage in managing change. There are currently 15 MPH degrees offered by SPH. The 13 that are state-supported have adopted the newly re-envisioned Common Core, and have adjusted their degree requirements (see template D2-1) as of the 2020-21 academic year. The remaining two MPH concentrations are managed through the University of Washington Continuum College (“fee-based” programs). Effective in the following academic year, 2021-22, the Online MPH (see D20) will also incorporate the new Common Core. Discussions will take place in the near future to determine whether or not the other fee-based degree, the Health Services: Community-Oriented Public Health Practice, will also incorporate the new curriculum.

The second phase of the MPH re-envisioning is in process and will review carefully the uniqueness and market need of each separate degree. This is being undertaken with a view both to maintain the School’s reputation for a rich range of concentrations, and to enable prospective students to more easily identify the specific MPH program of interest to them.

The School sub-contracted with a consultant during the 2019-20 academic year to perform a market research study of MPH degrees. This study included interviews with School alumni and employers of MPH graduates. In making their recommendations, the consultant noted that MPH employers are looking for master's-level applicants with strong analytical, verbal, and written communication, as well as administrative skills. As it assesses specific MPH program degrees, the School is being mindful of continuing to find ways to impart these competencies, as well as of the more general need to strengthen teaching of the specific foundational public health competencies in all of its degree programs.

D5. MPH Applied Practice Experience

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

Each MPH student is required to address five of the 22 foundational competencies through their applied practice experience (APE). Only one competency may be from the *Evidenced-Based Approaches to Public Health* section. The remaining four foundational competencies must be from other sections. This allows the program director to steer students toward a balanced set of practice-oriented competencies for their applied practice experience. Each student discusses their selected competencies with both their practicum faculty advisor and their practicum site supervisor. The competencies are part of the [MPH practicum contract](#) that the student completes and signs. Students are required to have at least two deliverables (written and visual) that demonstrate the five competencies that they choose to address through their APE. The contract also includes a requirement to describe the deliverables to be developed for the site. The student's practicum faculty advisor, site supervisor, and graduate program director must each approve the learning contract before the student can start their practicum.

At the conclusion of the practicum experience, each student is required to [submit products](#) for the site and assignments for the School for the practicum faculty advisor to review and evaluate competency alignment. While the products for the site vary widely depending on site needs and the student's career goals, the written assignment for the School is to demonstrate the student's knowledge of the practicum organization and elaborate on their attainment of each of the five competencies outlined in their learning contract. For example, students are encouraged to share what they have observed to be factors in determining policies and practices within the site organization that either help or hinder its ability to effectively address its mission (e.g., elimination of structural bias, social inequities, and/or racism), and they are encouraged to make recommendations to the organization's leaders based on their experiences and observations.

Dual degree students, including MD/MPH and MSW/MPH, have the option of completing an [Alternative Practicum Form](#). Although the students complete their practicum through School of Medicine or School of Social Work, respectively, they are required to address five of the 22 foundational competencies through their APE, and evaluate their attainment of them using the Form. It is reviewed by the Alternative Practicum Faculty Advisor in the second School, as well as the SPH Faculty Advisor, and approved prior to graduation.

The School uses a successful tracking system for the student practicum experiences. Faculty advisors can assess the activities and products to determine demonstration of stated competencies of the APE's mid-point and endpoint. By assessing progress toward competencies mid-point, faculty and students work together to adjust the activities to ensure competencies are met. This system allows faculty advisers to have quick access to student APE proposals, progress, and final products. Completion of the practicum experience and the assessment of deliverables is monitored by the manager of experiential learning in the Office of the Dean.

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

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\D5.2.

- 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 schools, if applicable. The school must provide samples of complete sets of materials (ie, Template D5-1 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 has not produced five students for which complete samples are available, note this and provide all available samples.**

All MPH students produce at least two practical work products for their practicum sites during their practicum experiences.

A poster is one of the many options for a visual deliverable, which can be printed to share with different audiences. Students are encouraged to create the content that best conveys their individual practicum experiences to their practicum audiences. Students also submit videos, slide decks, infographics, and other visual products instead of posters.

Listed below are examples of work students completed for practice partners during the 2019-20 academic year:

- Led development of a communications strategy for the upcoming launch of the WHO World Report on Hearing.
- Designed a program evaluation for an Indigenous community health worker program aimed at increasing breastfeeding rates and knowledge on tribal reservations nationally.
- Developed an organizational theory of change to communicate both internally and externally the resources, strategies, activities, outcomes, and goals of the Health Tanzania Foundation.
- Built a case for expanding the harm reduction services within the Whatcom County Health Department's Syringe Exchange Program, highlighting the community needs and the progressive actions the program is introducing to the community.
- Coordinated a county-level healthy eating policy committee and collaborated with communities on developing a potential nutrition-focused health policy with the Healthy Eating, Active Living unit at Public Health-Seattle & King County.

The practicum written report is an opportunity for students to elaborate on their attainment of each of the five competencies as outlined in their practicum learning contract.

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\D5.3.

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

Strengths

- SPH's annual MPH Practicum Symposium has been held in person every year for the last 21 years, and was held virtually for the first time in May 2020 due to COVID-19. More than 40 students presented their practicum projects in a series of sessions held via Zoom, a video conferencing tool. Session information is available here:
<https://sph.washington.edu/students/mph-practicum-symposium>.

Each student presenter was given 15 minutes to present and answer questions. Students have tackled projects that address climate change and health, gun violence, and the interface between humans, animals, and the environment. Some designed e-learning mentoring resources for public health professionals, communications plans for the World Health Organization, and disaster recovery plans for municipalities. Other examples included outreach for HIV prevention to transgender women in Peru; and helping to empower mothers in Kenya to identify malnutrition in their infants.

The School is delighted to have found a meaningful way to continue to honor students, faculty, and practice partners who provide SPH students with invaluable mentorship and practice-based project opportunities each year. The following programs and departments were represented in 2020 via the online forum:

- Environmental & Occupational Health Sciences
 - Epidemiology
 - Global Health
 - Health Services
 - Nutritional Sciences
 - Public Health Genetics
- As part of the new MPH Common Core, the committee with responsibility to manage the APE, known as the MPH Practicum Faculty Leads Committee, is led by the associate dean for public health practice and is comprised of faculty representing each of the MPH programs, and the manager for experiential learning. Current membership and representation includes:

<i>Name</i>	<i>Department or Program (or Role)</i>
Janet Baseman (Chair)	Office of the Dean, faculty
Tania Busch Isaksen	Environmental and Occupational Health Sciences, faculty
Steve Gloyd	Global Health, faculty
Anne Lund	Nutritional Sciences, faculty
Janice North	Office of the Dean, staff
Steve Schwartz	Epidemiology, faculty
Clarence Spigner	Health Services, faculty
Bruce Weir	Public Health Genetics, faculty

The Committee has convened monthly since January 2019 to recommend strategies and policies related to the educational role, faculty oversight, and academic administration of the MPH Applied Practice Experience that are appropriate for all concentrations.

Plans for improvement

- The MPH Practicum Faculty Leads Committee is continuing discussions of possibly expanding options for course-based practicum projects for all MPH students.

D6. DrPH Applied Practice Experience

This section not applicable to this School of Public Health.

D7. MPH Integrative Learning

- 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 to explain, for each experience, how it ensures that the experience demonstrates synthesis of competencies.

State-supported programs

MPH Integrative Learning Experience for	Environmental and Occupational Health Environmental and Occupational Health: Occupational Medicine Residency Environmental and Occupational Health: One Health
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis.	ENV H 700: Master's Thesis, 9 credits in course Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.

MPH Integrative Learning Experience for	Epidemiology: General Epidemiology: Global Health Epidemiology: Maternal and Child Health
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis.	EPI 700: Master's Thesis, 9-18 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students are required to include the competencies listed below, and may select additional appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.
Competencies students must address include:	D2-1: Apply epidemiological methods to the breadth of settings and situations in public health practice D2-2a: Select quantitative data collection methods appropriate for a given public health context D2-3a: Analyze quantitative data using biostatistics, informatics, computer-based programming and software, as appropriate D2-4: Interpret results of data analysis for public health research, policy or practice

MPH Integrative Learning Experience for	Global Health: General Global Health: Metrics and Evaluation
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis.	G H 700: Master's Thesis, minimum 9 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.

MPH Integrative Learning Experience for	Health Services: General Health Services: Social and Behavioral Sciences
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis.	HSERV 700: Master's Thesis, 9 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.

MPH Integrative Learning Experience for	Health Services: Health Systems and Policy
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis or capstone project.	HSERV 700: Master's Thesis, 9 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.
	HSERV 599: Capstone Project, 9 credits Students complete a capstone project to apply the competencies they select that involve analytical thinking and leadership skills by exploring a topic of importance tied to their specific degree area. The culminating project is assessed by an assigned faculty advisor with knowledge of the subject.

MPH Integrative Learning Experience for	Public Health Nutrition
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis or capstone project.	NUTR 700: Master's Thesis, 9 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.
	NUTR 596: Nutrition Practice Capstone, 4 credits Students complete a capstone project to apply the competencies they select that involve analytical thinking and leadership skills by exploring a topic of importance tied to their specific degree area. The culminating project is assessed by an assigned faculty advisor with knowledge of the subject.
MPH Integrative Learning Experience for	Public Health Genetics
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis.	PHG 700: Master's Thesis, 9 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.

Fee-based programs

MPH Integrative Learning Experience for	Health Services: Community-Oriented Public Health Practice Online Master of Public Health
Integrative learning experience (list all options)	How competencies are synthesized
All students are required to complete a thesis or capstone project.	HSERV 700: Master's Thesis, 9 credits Students conduct an original research project and write and defend a master's thesis as a year two culminating experience. The thesis is tied to their specific degree area. Students select appropriate competencies with guidance from their committee chair. Synthesis of the competencies in the thesis is assessed by an assigned faculty advisor with knowledge of the subject.
	HSERV 599: Capstone Project, 9 credits Students complete a capstone project to apply the competencies they select that involve analytical thinking and leadership skills by exploring a topic of importance tied to their specific degree area. The culminating project is assessed by an assigned faculty advisor with knowledge of the subject.

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

Each MPH concentration provides guidelines for students, staff, and faculty to follow to ensure student completion of an integrated learning experience. This is accomplished by either a thesis paper or capstone project. Students register for the appropriate thesis credits or capstone course, and faculty advisors or course instructors provide guidance and direction to complete this requirement. Examples of concentrations with established capstone courses include Public Health Nutrition and Health Services: Community-Oriented Public Health Practice.

Students meet initially with their faculty advisors, and other appropriate staff to learn about research (thesis) and/or capstone opportunities. Once their project is chosen, they submit a proposal for project approval, including necessary departmental and University forms. Both theses and capstones have a committee of two faculty to guide and review students' work. Students conduct the project as appropriate, gathering data, conducting interviews, etc., and meeting regularly with their committee (and staff) for guidance. The faculty committee helps the student evaluate progress along the way and then conducts the final assessment upon project completion to determine the student's grade.

3) Provide documentation, including syllabi and/or handbooks, that communicates integrative learning experience policies and procedures to students.

See materials in the Electronic Resource File:
Electronic Resource File\Criterion_D\1. MPH D1-7\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.

UW guidance for all master's theses is included on the UW Graduate School web site: <https://www.grad.washington.edu/for-students-and-post-docs/thesisdissertation/>. SPH follows these guidelines.

Guidelines and requirements for identification of appropriate competencies for SPH theses and capstone committees are developed for MPH theses and capstone experiences. For both the thesis and the capstone, students work with their faculty committee members to identify appropriate competencies. SPH requires that students select at least two CEPH Foundational Competencies for their project. For the thesis in particular, the proposal and competencies must be approved by the student's committee prior to data collection or analysis. The responsibility for the review and critique of all project deliverables, including proposals, identified competencies, work plans, progress reports, drafts, and final reports lies with the committee chair for the thesis, and with the faculty committee members for the capstone. The final grade may be either credit or a decimal grade. A thesis must meet the standard for a grade of 2.7 or higher before it can be accepted by the committee. The default is for the capstone to be graded as credit/no credit, at a minimum, but individual departments or programs may choose to grade the capstone using a decimal grade.

5) Include completed, graded samples of deliverables associated with each integrative learning experience option from different concentrations, if applicable. The school must provide at least 10% of the number produced in the last three years or five examples, whichever is greater.

Materials included in the Electronic Resource File
Electronic Resource File\Criterion_D\1. MPH D1-7\D7.5.

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

Strengths

- Students in some concentrations currently have flexibility in whether they pursue a capstone experience or a thesis as the culminating experience for their concentration.

Plans for improvement

As noted previously, there is a new MPH Steering Committee charged with facilitating additional cross-concentration protocols and other revisions to the current MPH curriculum that are common to all concentrations. One task assigned to this group for the 2020-21 academic year is to consider and recommend expectations for the Integrative Learning Experience (ILE) within the MPH curriculum for the state-supported degrees. The Committee is in the initial stages of these discussions and continues work in this area.

The UW Graduate School defines a thesis as “evidence of the graduate student’s ability to carry out independent investigation and to present the results in a clear and systematic form.” While a thesis is useful for students with research interests and expecting to work in research, a capstone project is well-suited for those students headed into “a real-world setting,” to showcase the application of the “knowledge and theory they have learned” (reference: <https://www.gradschoolhub.com/faqs/what-is-a-capstone-project-in-graduate-school/>).

The MPH Steering Committee acknowledges that different students may prefer either a thesis or capstone project based on their interests and career goals in public health research or practice. With this in mind, the Committee believes that both the thesis and capstone have value as an ILE.

As shown in the table below, the majority of the current MPH degrees only provide a thesis option. The Committee is working with these degree programs to add a capstone option within the next two years. Doing this will provide more flexibility for students as well as efficiencies in both faculty time and cost-savings. For the incoming 2020 cohort, the MPH degrees within the Global Health and Health Services departments will have capstones in addition to those shown in the table.

Current MPH Degrees	Thesis	Capstone
Environmental and Occupational Health	✓	
Environmental and Occupational Health: Occupational Medicine Residency	✓	
Environmental and Occupational Health: One Health	✓	
Epidemiology: General	✓	
Epidemiology: Global Health	✓	
Epidemiology: Maternal and Child Health	✓	
Global Health: General	✓	
Global Health: Health Metrics and Evaluation	✓	
Health Services: Community-Oriented Public Health Practice	✓	✓
Health Services: General	✓	
Health Services: Health Systems and Policy	✓	✓
Health Services: Social and Behavioral Sciences	✓	
Online Master of Public Health	✓	✓
Public Health Nutrition	✓	✓
Public Health Genetics	✓	

The School has begun implementing a consistent practice across departments for students to develop and track learning competencies for student ILEs. Building upon a tracking system developed for the student practicum experiences, students are working with faculty advisors to name the relevant CEPH Foundational Competencies for their capstone/thesis. Faculty advisors assess the ILE activities and products to evaluate each student's declared competencies at mid-point and endpoint of the ILE. By assessing progress toward competencies mid-point, faculty and students work together to adjust the ILE activities to ensure competencies are met. By centralizing ILE information in an SPH shared database and management platform, all faculty advisors will have quick access to student ILE proposals, progress, and final products.

D8. DrPH Integrative Learning Experiences

This section not applicable to this School of Public Health.

D9. Public Health Bachelor's Degree General Curriculum

1) List the coursework required for the school's bachelor's degree.

The general education requirements for the School of Public Health's bachelor's degrees (majors and options) include basic skills in Areas of Knowledge (Visual, Literary, and Performing Arts (VLPA), Individuals and Societies (I&S), and Natural World (NW)), in common with all undergraduate degrees at the University of Washington. They are provided online:

http://www.washington.edu/students/gencat/academic/school_public_health.html#UNDER.

Course requirements for the **Public Health-Global Health** Bachelor of Arts (BA) and Bachelor of Science (BS) degrees (180 credits total), identical except selectives*, are listed below and are also provided online: <https://sph.washington.edu/phgh/requirements>.

Public Health-Global Health Major (BA or BS)	Minimum
Integrated Core	20 credits
SPH 380: History & Practice of Public Health	5
SPH 381: Science of Public Health	5
SPH 480: Research Methods in Public Health	5
SPH 481: Ethics, Social Justice, and Policy in Public Health	5
Public Health Foundation	8 credits
BIOST 310: Biostatistics for the Health Sciences (or other listed courses in STAT, Q SCI or QMETH)	4
EPI 320: Introduction to Epidemiology	4
Diversity Seminar	1 credit
SPH 489: Structural Racism and Public Health	1
Social & Behavioral Sciences Breadth	25 credits
One 5-credit course from each of: Anthropology, Geography, Political Science, Psychology, Sociology; at least 4 of the 5 must be 200-level or above	5x5
Natural Science	10 credits
Biology: One of BIOL 118: Survey of Physiology, BIOL 180: Introductory Biology, or MICROM 301/302: General Microbiology/General Microbiology Laboratory	5
Chemistry: One of CHEM 120: Principles of Chemistry I, CHEM 142: General Chemistry, or CHEM 145: Honors General Chemistry	5
BA Selectives*	20 credits
Four to six courses identified to address competency areas in health economics, health promotion, and social justice (list of more than 71)	20
BS Selectives*	30 credits
<i>Two-year long sequence of introductory science</i>	
Additional Biology (beyond Natural Science) from BIOL 180, 200, 220: Introductory Biology	10-15
Additional Chemistry (beyond Natural Science) from CHEM 142, 152, 162: General Chemistry	10-15
Choice from listed Biochemistry, Organic Chemistry, Physics, Mathematics courses	10
Public Health Electives	20 credits
Choose from list of more than 30 courses from Public Health or 90 courses from across campus	20
Public Health capstone (2 quarters)	5 credits

In addition to the BA (109 credit minimum specified) and BS (119 credit minimum specified) pathways, there are three options that can provide structure and direction for a student's area of focus within a liberal education public health framework:

<https://sph.washington.edu/phgh/requirements/options>.

Bachelor of Arts in Public Health-Global Health: Global Health option

In this option, students become familiar with major problems and policy issues in global health and are able to discuss the determinants of global health and global responses to health problems, including health systems.

- Required introductory course: G H 101: Introduction to Global Health: Disparities, Determinants, Policies, and Outcomes (5 credits)
- In the required 20 Public Health-Global Health elective credits, students will take:
 - G H 305: Global Health and Justice (3 credits)
 - G H 401: Core Topics in Global Health (3 credits)
 - G H 402: Current Research and Programs in Global Health (3 credits)
 - G H prefix courses (6-11 credits)
 - PH-GH elective courses (0-5 credits)

Bachelor of Arts in Public Health-Global Health: Health Education and Promotion option

In this option, students explore the development of individual, group, institutional, community, and systemic strategies to improve health knowledge, attitudes, skills, and behaviors. This option aligns with competencies required for the [Certified Health Education Specialist \(CHES\)](#) credential.

- Required introductory course: HSERV 100: Personal and Public Health (3 credits)
- In the required 20 Public Health-Global Health BA selective credits students will take:
 - HSERV 100: Personal and Public Health (3 credits)
 - HSERV 204: Communicating about Health: Current Issues and Perspectives (3 credits)
 - BA Selective courses (14-15 credits)
- In the required 20 Public Health-Global Health elective credits, students will take:
 - HSERV 343: Health Behavior and Health Promotion (5 credits)
 - HSERV 344: Public Health and Health Systems Management (5 credits)
 - HSERV 345: Community Health Assessment (5 credits)
 - SPH 495: Public Health Internship (5 credits, totaling 150 hours of experiential learning on or off campus)

Bachelor of Science in Public Health-Global Health: Nutritional Sciences option

In this option, students receive a robust foundation in natural sciences along with their nutrition-focused public health fundamentals. This option is a Bachelor of Science pathway for graduate studies in nutritional sciences, including those programs that lead to a Registered Dietitian credential.

- Required introductory course: NUTR 200: Nutrition for Today (4 credits)
- In the required 20 Public Health Elective credits, students will take at least 9 credits from:
 - NUTR 310: Nutrition and the Life Course (4 credits)
 - NUTR 405: Physical Activity in Health and Disease (3 credits)
 - NUTR 406: Sports Nutrition (3 credits)
 - NUTR 411: Diet in Health and Disease (3 credits)
 - NUTR 420: Global Nutrition: Challenges and Opportunities (3 credits)
 - NUTR 446: Food Safety and Health (3 credits)
- The remaining credits to complete the total of 20 elective credits will be from:
 - NUTR 302: Food Systems: Harvest to Health (5 credits)
 - NUTR 303: Food Systems: Individual to Population Health (5 credits)
 - NUTR 400: Nutrition Systems, Nutrition, and Health Seminar (max. 2 credits)
 - NUTR 412: United States Food Systems Policy (3 credits)
 - NUTR 465: Nutritional Anthropology (3 credits)

Course requirements for the **Environmental Health** Bachelor of Science degree (180 credits) are below and also provided online: <https://deohs.washington.edu/degree-requirements>.

Environmental Health (BS)	Minimum
Supporting Science	49 credits
MATH 124: Calculus with Analytic Geometry I or Q SCI 291: Analysis for Biologists I	5
BIOST 310: Biostatistics for the Health Sciences, recommended, or STAT 220: Statistical Reasoning, STAT 311: Elements of Statistical Methods, Q SCI 381: Introduction to Probability and Statistics	4-5
BIOL 180, 200, 220: Introductory Biology	15
One of the general and organic chemistry sequences: CHEM 142, CHEM 152: General Chemistry, etc.	15-26
PHYS 114/PHYS 117 or PHYS 115/PHYS 118: General Physics	10
Environmental Health Core	37 credits
ENV H 311: Introduction to Environmental Health	3
ENV H 320: Introduction to Technical Communication in Environmental Health	5
ENV H 405: Toxic Chemicals and Human Health	3
ENV H 432: Chemical Sampling and Analysis	5
ENV H 433: Microbiological Sampling and Analysis	5
ENV H 472: Environmental Risk and Society	3
ENV H 473: Environmental Health Policy and Practice	4
ENV H 480: Undergraduate Seminar	1
ENV H 482: Environmental Health Internship (400 hours)	2-15
EPI 320: Introduction to Epidemiology	4
MICROM 301: General Microbiology	3
MICROM 302: General Microbiology Laboratory	2
Environmental Health Selectives	12 credits
Choose minimum of four courses from a list of 18 ENVH courses	4x3
Environmental Health Electives	21 credits
Choose from list of more than 90 courses from across campus	21

- 2) **Provide official documentation of the required components and total length of the degree, in the form of an institutional catalog or online resource. Provide hyperlinks to documents if they are available online, or include copies of any documents that are not available online.**

Public Health-Global Health: The University of Washington General Catalog, Student Guide for Bachelor of Arts and Bachelor of Science Public Health-Global Health majors and options are provided online:

http://www.washington.edu/students/gencat/academic/school_public_health.html#UNDER.

Environmental Health: The University of Washington General Catalog, Student Guide for the Bachelor of Science degree with a major in environmental health is provided online:

<http://www.washington.edu/students/gencat/academic/envh.html>.

- 3) Provide a matrix, in the format of Template D9-1, that indicates the courses/experience(s) that ensure that students are introduced to each of the domains indicated. Template D9-1 requires the school to identify the experiences that introduce each domain.

Public Health-Global Health Bachelor of Arts and Bachelor of Science	
Domains	Courses and other learning experiences through which students are introduced to the domains specified
Science: Introduction to the foundations of scientific knowledge, including the biological and life sciences and the concepts of health and disease	1 quarter epidemiology (EPI 320) 1 year general biology with labs (BIOL 180, 200, 220) 1 year general and organic chemistry with labs (CHEM 142, 152, 220) 1 quarter microbiology with lab (MICROM 301, 302) 2 quarters physics with labs (PHYS 114/117, 115/118)
Social and Behavioral Sciences: Introduction to the foundations of social and behavioral sciences	2 quarters (10 credits) of I&S I&S courses focus on the experimental study of human behavior both individually and socially. This includes the history, development, and dynamics of human behavior, as well as social and cultural institutions. Examples: PSYCH 101, SOC 110. Students also take ENV H 472.
Math/Quantitative Reasoning: Introduction to basic statistics	1 quarter statistics (BIOST 310, STAT 311, or Q SCI 381) 1 quarter calculus (MATH 124 or Q SCI 291)
Humanities/Fine Arts: Introduction to the humanities/fine arts	2 quarters (10 credits) of VLPA VLPA courses focus on questions of meaning and value in human life, as well as the effective expression of the human experience. The term "art" is used here in a broad sense and suggests practices and crafts of all kinds rather than simply Western studio traditions. Examples: MUSIC 120, C LIT 240.

Domains	Courses and other learning experiences through which students are introduced to the domains specified
Science: Introduction to the foundations of scientific knowledge, including the biological and life sciences and the concepts of health and disease	1 quarter epidemiology (EPI 320) 1 year general biology with labs (BIOL 180, 200, 220) 1 year general and organic chemistry with labs (CHEM 142, 152, 220) 1 quarter microbiology with lab (MICROM 301, 302) 2 quarters physics with labs (PHYS 114/117, 115/118)
Social and Behavioral Sciences: Introduction to the foundations of social and behavioral sciences	2 quarters (10 credits) of I&S I&S courses focus on the experimental study of human behavior both individually and socially. This includes the history, development, and dynamics of human behavior, as well as social and cultural institutions. Examples: PSYCH 101, SOC 110. Students also take ENV H 472.
Math/Quantitative Reasoning: Introduction to basic statistics	1 quarter statistics (BIOST 310, STAT 311, or Q SCI 381) 1 quarter calculus (MATH 124 or Q SCI 291)
Humanities/Fine Arts: Introduction to the humanities/fine arts	2 quarters (10 credits) of VLPA VLPA courses focus on questions of meaning and value in human life, as well as the effective expression of the human experience. The term "art" is used here in a broad sense and suggests practices and crafts of all kinds rather than simply Western studio traditions. Examples: MUSIC 120, C LIT 240.

BIOL 180/200/220: Introductory Biology
BIOST 310: Biostatistics for the Health Sciences
C LIT 240: Writing in Comparative Literature
CHEM 142/152: General Chemistry
CHEM 220: Principles of Chemistry II
ENV H 472: Risk and Society
EPI 320: Introduction to Epidemiology
MATH 124: Calculus with Analytic Geometry
MICROM 301/302: General Microbiology
MUSIC 120: Survey of Music
PHYS 114/117, 115/118: General Physics
PSYCH 101: Introduction to Psychology
Q SCI 291: Analysis for Biologists I
Q SCI 381: Introduction to Probability and Statistics
SOC 110: Survey of Sociology
STAT 311: Elements of Statistical Methods

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

Strengths

Public Health-Global Health BA & BS and Environmental Health BS

- These programs have ongoing discussions with other UW schools and programs to ensure that courses remain available and accessible to students. The Undergraduate Programs Strategic Working Group is one forum for School discussions, but the School's Curriculum and Educational Policy Committee (CEPC) discusses and reviews proposed new courses that might align to degree requirements. Changes in required courses are reviewed both by the CEPC, and by the University of Washington's Curriculum Committee.

D10. Public Health Bachelor's Degree Foundational Domains

- 1) Provide a matrix, in the format of Template D10-1, that indicates the courses/experience(s) that ensure that students are exposed to each of the domains indicated. Template D10-1 requires the school to identify the learning experiences that introduce and reinforce each domain. Include a footnote with the template that provides the school's definition of "introduced" and "covered."

Public Health-Global Health Bachelor of Arts and Bachelor of Science									
Key: I=introduced, C=covered		UW SPH definition: Introduced indicates topic is taught to some degree but not assessed; Covered is taught and assessed.							
Public Health Domains		Course Name and Number							
		EPI 320: Introduction to Epidemiology	SPH 380: History & Practice of Public Health	SPH 381: Science & Public Health	SPH 480: Research Methods in Public Health	SPH 481: Ethics, Social Justice and Policy in Public Health	SPH 489: Undoing Racism in Public Health	SPH 491: PH Capstone I	SPH 492: PH Capstone II
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									
	Public Health History		C						
	Public Health Philosophy		C			C			
	Core PH Values		C			C			
	Core PH Concepts		C						
	Global Functions of Public Health		C			I			
	Societal Functions of Public Health		C						
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									
	Basic Concepts of Data Collection	C		I	C				
	Basic Methods of Data Collection	C		I	C				
	Basic Tools of Data Collection	C		I	C				
	Data Usage	C		C	C				
	Data Analysis	C		I	C				
	Evidence-based Approaches	C		C	C				

		EPI 320: Introduction to Epidemiology	SPH 380: History & Practice of Public Health	SPH 381: Science & Public Health	SPH 480: Research Methods in Public Health	SPH 481: Ethics, Social Justice and Policy in Public Health	SPH 489: Undoing Racism in Public Health	SPH 491: PH Capstone I	SPH 492: PH Capstone II
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			C	C
	Introduction to Processes and Approaches to Identify Needs and Concerns of Populations	I	C		C			C	C
	Introduction to Approaches and Interventions to Address Needs and Concerns of Populations	C	C		C			C	C
Human Health: Address the underlying science of human health and disease including opportunities for promoting and protecting health across the life course									
	Science of Human Health and Disease	I		C					
	Health Promotion	I	C	I					
	Health Protection	I	C						
Determinants of Health: Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities									
	Socio-economic Impacts on Human Health and Health Disparities	I		C			C	C	C

		EPI 320: Introduction to Epidemiology	SPH 380: History & Practice of Public Health	SPH 381: Science & Public Health	SPH 480: Research Methods in Public Health	SPH 481: Ethics, Social Justice and Policy in Public Health	SPH 489: Undoing Racism in Public Health	SPH 491: PH Capstone I	SPH 492: PH Capstone II
	Behavioral Factors Impacts on Human Health and Health Disparities	I		C			I	C	C
	Biological Factors Impacts on Human Health and Health Disparities	I		C				C	C
	Environmental Factors Impacts on Human Health and Health Disparities	I		C			I	C	C
Project Implementation: Address the fundamental concepts and features of project implementation, including planning, assessment, and evaluation									
	Introduction to Planning Concepts and Features				C				
	Introduction to Assessment Concepts and Features				C				
	Introduction to Evaluation Concepts and Features				C				
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 and Structures of the U.S. Health System		C						
	Comparative Health Systems		C						

		EPI 320: Introduction to Epidemiology	SPH 380: History & Practice of Public Health	SPH 381: Science & Public Health	SPH 480: Research Methods in Public Health	SPH 481: Ethics, Social Justice and Policy in Public Health	SPH 489: Undoing Racism in Public Health	SPH 491: PH Capstone I	SPH 492: PH Capstone II
Health Policy, Law, Ethics, and Economics: 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									
	Legal dimensions of health care and public health policy					C			
	Ethical dimensions of health care and public health policy					C			
	Economical dimensions of health care and public health policy					C			
	Regulatory dimensions of health care and public health policy		C			I			
	Governmental Agency Roles in health care and 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	C	I		C	C
	Professional writing		C	I	C	I		C	C
	Use of Mass Media		C	I	I	I			
	Use of Electronic Technology		C		C	I			

Public Health-Global Health Education and Promotion Option			
Below table shows areas where PH-GH prepares students for the CHES exam.			
Apply health behavior theories to specific public health problems	HSERV 343: Health Behavior and Health Promotion	HSERV 344: Public Health and Health Systems Management	HSERV 345: Community Health Assessment
Examine factors that enhance or impede the process of health promotion	C		
Involve priority populations, partners, and other stakeholders in the health promotion planning process	C		
Develop a plan for the delivery of health education/promotion	C		
Develop evaluation plan for health education/promotion	C		
Develop a research plan for health education/promotion	C		
Manage financial, technologic resources		C	
Manage human resources		C	
Manage relationships with stakeholders		C	
Advocate for programs		C	
Demonstrate leadership		C	
Plan Community Assessment for Health Education and Promotion			C
Practice Ethical conduct in Community Health Assessment			C
Engage community partners in design, implementation, and evaluation of Community Health Assessment			C
Determine community needs based on results of CHA			C
Use data to develop and evaluate Health Education and Promotion programming			C

Environmental Health Bachelor of Science

Key: I=introduced, C=covered		UW SPH definition: Introduced indicates topic is taught to some degree but not assessed; Covered is taught and assessed.							
Public Health Domains		Course Name and Number							
		ENV H 311 Intro. to Enviro. Health	ENV H 320 Intro to Technical Communication	ENV H 405 Toxic Chemicals & Human Health	ENV H 432 Chemical Sampling & Analysis	ENV H 433 Microbiolog. Sampling & Analysis	ENV H 472 Enviro. Risk & Society	ENV H 473 Enviro. Health Policy & Practice	ENV H 482 Enviro. Health Internship
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									
	Public Health History	C		C			C	I	
	Public Health Philosophy	C					C		
	Core PH Values	C					C		
	Core PH Concepts	C					C		
	Global Functions of Public Health	C					C		
	Societal Functions of Public Health	C					IC	IC	
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									
	Basic Concepts of Data Collection	IC		IC	IC	IC		IC	
	Basic Methods of Data Collection	IC		IC	IC	IC		IC	
	Basic Tools of Data Collection	IC	IC	IC	IC	IC		IC	

		ENV H 311 Intro. to Enviro. Health	ENV H 320 Intro to Technical Communication	ENV H 405 Toxic Chemicals & Human Health	ENV H 432 Chemical Sampling & Analysis	ENV H 433 Microbiolog. Sampling & Analysis	ENV H 472 Enviro. Risk & Society	ENV H 473 Enviro. Health Policy & Practice	ENV H 482 Enviro. Health Internship
	Data Usage	IC	IC	IC	IC	IC	IC	I	
	Data Analysis	IC	IC	IC	IC	IC	IC	I	
	Evidence-based Approaches	IC		IC	IC	IC	IC	I	
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	IC						I	
	Introduction to Processes and Approaches to Identify Needs and Concerns of Populations	IC					IC	IC	
	Introduction to Approaches and Interventions to Address Needs and Concerns of Populations	IC					IC	IC	
Human Health:									
Address the underlying science of human health and disease including opportunities for promoting and protecting health across the life course									
	Science of Human Health and Disease	C	I	C			C		
	Health Promotion	C	I						
	Health Protection	C					C		

		ENV H 311 Intro. to Enviro. Health	ENV H 320 Intro to Technical Communication	ENV H 405 Toxic Chemicals & Human Health	ENV H 432 Chemical Sampling & Analysis	ENV H 433 Microbiolog. Sampling & Analysis	ENV H 472 Enviro. Risk & Society	ENV H 473 Enviro. Health Policy & Practice	ENV H 482 Enviro. Health Internship
Determinants of Health: Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities									
	Socio-economic Impacts on Human Health and Health Disparities	C					C	C	
	Behavioral Factors Impacts on Human Health and Health Disparities	C					C	C	
	Biological Factors Impacts on Human Health and Health Disparities	IC		IC			IC	I	
	Environmental Factors Impacts on Human Health and Health Disparities	IC	IC	IC	IC	IC	IC	IC	
Project Implementation: Address the fundamental concepts and features of project implementation, including planning, assessment, and evaluation									
	Introduction to Planning Concepts and Features	I	IC		IC			IC	

		ENV H 311 Intro. to Enviro. Health	ENV H 320 Intro to Technical Communication	ENV H 405 Toxic Chemicals & Human Health	ENV H 432 Chemical Sampling & Analysis	ENV H 433 Microbiolog. Sampling & Analysis	ENV H 472 Enviro. Risk & Society	ENV H 473 Enviro. Health Policy & Practice	ENV H 482 Enviro. Health Internship
	Introduction to Assessment Concepts and Features	I			IC	IC		IC	
	Introduction to Evaluation Concepts and Features	I			IC	IC		IC	
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 and Structures of the U.S. Health System	IC							
	Comparative Health Systems	IC							
Health Policy, Law, Ethics, and Economics: 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									
	Legal dimensions of health care and public health policy	IC		IC				IC	
	Ethical dimensions of health care and public health policy	C						I	

		ENV H 311 Intro. to Enviro. Health	ENV H 320 Intro to Technical Communication	ENV H 405 Toxic Chemicals & Human Health	ENV H 432 Chemical Sampling & Analysis	ENV H 433 Microbiolog. Sampling & Analysis	ENV H 472 Enviro. Risk & Society	ENV H 473 Enviro. Health Policy & Practice	ENV H 482 Enviro. Health Internship
	Economical dimensions of health care and public health policy	IC						IC	
	Regulatory dimensions of health care and public health policy	IC		IC			IC	IC	
	Governmental Agency Roles in health care and public health policy	IC						IC	
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	IC	IC		IC	IC	IC		C
	Professional writing	IC	IC					IC	C
	Use of Mass Media		IC				I		C
	Use of Electronic Technology	IC	IC						C

- 2) **Include the most recent syllabus from each course listed in Template D10-1, or written guidelines, such as a handbook, for any required experience(s) listed in Template D10-1 that do not have a syllabus.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\2. Bachelors D9-13\D10.2.

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

Strengths

Public Health-Global Health

- A strength of these majors are that the foundational content is all incorporated into the required core course sequence. Students move sequentially through the core (SPH prefix courses) and thus content can be scaffolded with intentional progression upward to higher [Blooms Taxonomy](#) levels. Public Health-Global Health (PH-GH) integrates experiential/applied learning appropriate to different levels of competency as students move through the sequence, culminating with the capstone, and with opportunities to do research and internships. Core instructors meet regularly and maintain familiarity with content across the core.
- Another strength is the development of the PH-GH: Health Education and Promotion Option. This option meets the criteria for students to sit for the Certified Health Education Specialist (CHES) exam. Students are required to take the core course sequence and complete three courses (HSERV 343: Health Behavior and Health Promotion, HSERV 344: Public Health and Health Systems Management, HSERV 345: Community Health Assessment) developed specifically for this option, and counting towards the 20 credits of PH-GH electives. The development of these courses followed a backward competency design methodology. PH-GH evaluated competencies required for CHES against competencies covered in the required core sequences. Any competencies felt to be inadequately covered were divided among the Health Services required course sequence (as noted above). As part of this option, students are required to complete an internship. PH-GH works to develop relevant and appropriate internships for students and this is a continuous improvement process. Since the option was developed, none of the students who completed it actually applied for the CHES examination. It should be noted that several students completed the examination by petition prior to the development of the option, with success.

Environmental Health

- A strength for the Environmental Health major is that the foundational content is incorporated into the required core courses (listed in D9.1). These courses are managed entirely by the Environmental and Occupational Health Sciences department and allow the degree architecture to be nimble and responsive to changes in the environmental public health practice community's foundational needs. Additionally, all courses (including selectives and electives), undergo a routine assessment process to ensure alignment with our practice stakeholders' needs, especially when changing instructors.
- Another strength for the Environmental Health major is its accreditation through the National Environmental Health Science & Protection Accreditation Council (EHAC). Graduation from an EHAC- or selected Accreditation Board for Engineering and Technology-accredited (ABET) program is required to enter the [US Public Health Service](#) as an environmental health officer for applicants who only possess an undergraduate degree. Similar requirements for BS degree-holders exist for other uniformed services, including the armed services. Undergraduate and graduate students from accredited programs are eligible to participate in their Junior Commissioned Officer Student Training and Extern Program ([JRCOSTEP](#)) internship program, and no other accrediting body affords undergraduate students this opportunity. Long-term careers often result for alumni of the JRCOSTEP internship program. Graduates of EHAC-accredited programs meet the criteria to take the Registered Environmental Health Specialist/Registered Sanitarian (REHS/RS) credential examination through the National Environmental Health Association ([NEHA](#)) upon graduation. Students from non-accredited programs must be employed

in the environmental health profession for two years before taking the REHS/RS examination. EHAC students have exclusive access to the National Environmental Health Association's (NEHA) National Environmental Public Health Internship Program ([NEPHIP](#)). EHAC students are also eligible for the nine-week CDC Summer Program in Environmental Health ([SUPEH](#)). Further, EHAC students are provided with information about internship and scholarship opportunities, and are eligible to compete for scholarships and internships provided by [AEHAP and NSF International](#), including a trip to NEHA's annual conference to present their research.

Plans for improvement

Public Health-Global Health

- A continual challenge is how to integrate intentional revisiting of competencies (in order to build higher level of competence) without students feeling as if the curriculum is redundant. PH-GH works continuously on ways to address this. PH-GH has developed strategies to increase transparency for students. The most recent effort, in the 2019-2020 academic year, was the roll-out of the program handbook. PH-GH is particularly proud of the section on learning and frameworks. PH-GH then uses the handbook during student orientation and refers to it regularly in core coursework, advising, and faculty meetings.

D11. Public Health Bachelor's Degree Foundational Competencies

- 1) Provide a matrix, in the format of Template D11-1, that indicates the assessment opportunities that ensure that students demonstrate the stated competencies.

Public Health-Global Health Bachelor of Arts and Bachelor of Science

Competencies		Course number(s) & name(s) or other educational requirements	Specific assessment opportunity
Public Health Communication: Students should be able to communicate public health information, in both oral and written forms and through a variety of media, to diverse audiences		The overall curricular design provides opportunities for students to develop communication skills. All core course instructors utilize active learning methods in content delivery. The overall curricular design provides opportunities for students to communicate with diverse audiences due to the holistic admissions process and intentional design of diverse student cohorts.	
	Oral communication	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health SPH 489: Structural Racism and Public Health SPH 491/492: Capstone I/Capstone II	SPH 380: An active learning classroom requires work in teams with interactive class structure and frequent oral communication in response to questions; random call increases participation of all voices; Covered: students complete 3 writing assignments and are taught skills in peer review with 3 opportunities to practice; presentation of Public Service Announcement (PSA) to class.
	Written communication	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health EPI 320: Introduction to Epidemiology SPH 489: Structural Racism and Public Health SPH 491/492: Capstone I/Capstone II	SPH 481: Policy brief, summary of policy background.
	Communicate with diverse audiences	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 491/492: Capstone I/Capstone II	SPH 480: Assignments 1-5: There are 5 written assignments in the course, each focused on exposure to/practice of technical PH writing. Assignment 1 (narrative review) and assignment 4 (writing a review of a research seminar) address "public facing" writing, such that the students are asked to synthesize research to present the overall question, hypothesis, results, and interpretation. Assignments 2 (concept paper) and 3 (survey design) are more aligned with technical writing skills used in public health. Assignment 5 is a more traditional assignment where students are asked to read and synthesize material from 3 peer-reviewed articles.
	Communicate through variety of media	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health SPH 491/492: Capstone I/Capstone II	SPH 380: students complete 3 writing assignments and are taught skills in peer review with 3 opportunities to practice; presentation of Public Service Announcement (PSA) to class.

Competencies		Course number(s) & name(s) or other educational requirements	Specific assessment opportunity
Information Literacy: Students should be able to locate, use, evaluate and synthesize public health information			
	Locate information	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health SPH 489: Structural Racism and Public Health SPH 491/492: Capstone I/Capstone II	SPH 480: Assignment 1: A narrative literature review requires them to locate, use, and synthesize research into a written narrative review; also exam questions address this. For Assignment 3, they are challenged with finding "validated" survey questions (introducing psychometrics, validity, etc.) and applying these in their questionnaire. For Assignment 4, they are asked to attend, and synthesize a research seminar. For Assignment 5, they are assigned 3 articles to read and synthesize.
	Use information	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health EPI 320: Introduction to Epidemiology SPH 489: Structural Racism and Public Health SPH 491/492: Capstone I/Capstone II	SPH 491/492: Service Learning, students use information about their service site population in work with agency to develop population profile, stakeholder interviews, and culminating paper with recommendations to agency.
	Evaluate information	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health EPI 320: Introduction to Epidemiology SPH 489: Structural Racism and Public Health SPH 491/492: Capstone I/Capstone II	EPI 320: The class has a session on reading epidemiology manuscripts. The manuscript is chosen for them so no training on locating information. However, students are taught to read critically, look for biases/sources of error, and interpret results. Several homework assignments touch on these concepts as well.
	Synthesize information	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health EPI 320: Introduction to Epidemiology SPH 489: Structural Racism and Public Health SPH 491/492: Capstone I/Capstone II	SPH 491/492: Service Learning, students use grey literature, peer review literature, and experience servicing population, stakeholder interviews to synthesize information for culminating project.

Environmental Health Bachelor of Science

Competencies		Course number(s) & name(s) or other educational requirements	Specific assessment opportunity
Public Health Communication: Students should be able to communicate public health information, in both oral and written forms and through a variety of media, to diverse audiences		There is a course designed to cover these competencies: ENV H 320. ENV H 311, 472, 482, 432, 433, and 473 all have major assignments that cover most or all of the below communication competencies.	
	Oral communication	ENV H 320: Introduction to Technical Communication in Environmental Health	Students must deliver both a "technical" and a "general audience" oral presentation.
	Written communication		Students must prepare an executive summary, a press release, a final report and interview summary, and a personal reflection piece.
	Communicate with diverse audiences		Students are asked to prepare written and oral assignments for different audience types.
	Communicate through variety of media		The types of assignments reflect the different types of media: press release, executive report, report and oral presentations using PowerPoint.
Information Literacy: Students should be able to locate, use, evaluate and synthesize public health information		ENV H 320 continues to be used, however, ENV H 311, 472, 432, 433, and 473 all have major assignments that cover all of the below competencies.	
	Locate information	ENV H 320: Introduction to Technical Communication in Environmental Health	Illustrated in each assignment, particularly in the final report.
	Use information		Evaluated in interview assignment.
	Evaluate information		Assessed in interview assignment.
	Synthesize information		Evaluated in executive summary.
		ENV H 311:	Introduction to Environmental Health
		ENV H 432:	Chemical Sampling and Analysis
		ENV H 433:	Microbiological Sampling and Analysis
		ENV H 472:	Environmental Risk and Society
		ENV H 473:	Environmental Health Policy and Practice
		ENV H 482:	Environmental Health Internship

- 2) **Include the most recent syllabus from each course listed in Template D11-1, or written guidelines, such as handbook, for any required elements listed in Template D11-1 that do not have a syllabus.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\2. Bachelors D9-13\D11.2.

- 3) **If applicable, include examples of student work indicated in Template D11-1.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\2. Bachelors D9-13\D11.3.

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

Strengths

Public Health-Global Health

- The Public Health-Global Health major has adopted a writing-across-the-curriculum approach and different genres of writing are intentionally integrated across the core courses. Examples of the writing genres included are an annotated bibliography, public service announcement, literature review, grant proposal, and a policy brief. The major strives for an intentionally diverse cohort, and students learn and engage in peer review of writing assignments. PH-GH views the attention to student competence in oral and written communication as both a strength and a place for continuing improvement. For example, core courses use active learning techniques which incorporate oral communication in pairs, small groups, and to larger audiences, and examples include formal presentations (individual and group) and less formal opportunities for presenting a position in class discussions (small group guided discussion, "[random call](#)").
- Faculty communicate regularly between courses about what is assigned, and have worked to build consistency in how to write assignments. In addition, PH-GH has adopted a requirement across the core courses for the use of the American Medical Association (AMA) or American Psychological Association (APA) referencing format as the only accepted reference styles so students can become proficient in a style. Naturally, it is recognized that there are multiple reference formats and different audiences require the use of specific formats. Regarding building oral communication skills, random call is now used to some degree across the core courses. This innovation was introduced based on the evidence that it supports equity in oral expression in the classroom environment.

Environmental Health

- The Environmental Health major has chosen to meet the writing competency through the completion of one required course (ENV H 320: Introduction to Technical Communication in Environmental Health). The course introduces explicit writing instruction and allows for practice with a variety of writing genres and audiences. It also incorporates oral communication via small and large group formats, as well as individual, audience-tailored presentations.

Weaknesses and Plans for improvement

Public Health-Global Health

- Challenges include the high enrollment in core courses (~100 students), and the wide range of oral and written experience and skills with which students enter the program. PH-GH has found variability in student understanding of the concepts of "credible sources," plagiarism, and the importance of voice. This latter is of particular salience because of the increased focus on social justice issues within written communication—noting who has a voice and who does not. Despite building peer-review into the courses and supporting core courses with strong teaching assistance, it always seems there is room for improvement. PH-GH continually revisits teaching

and supporting development of written communication skills, including how best to provide feedback to students on writing. Over the years, PH-GH has adapted assignments in attempts to scaffold skills necessary for student success.

D12. Public Health Bachelor's Degree Cumulative and Experiential Activities

- 1) Provide a matrix, in the format of Template D12-1, that identifies the cumulative and experiential activities through which students have the opportunity to integrate, synthesize and apply knowledge as indicated.

Public Health-Global Health Bachelor of Arts and Bachelor of Science

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.
SPH 491/492: Capstone I/Capstone II (2-3 credits)	Students do a service learning capstone which includes preparation for field work, 50 hours of community service, and culminating academic work in their last two quarters. Students reflect on and integrate their service experience and academic content to assess community needs, apply theories, build relationships with partners, and understand the larger public health landscape.

Environmental Health Bachelor of Science

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.
ENV H 482: Environmental Health Internship (2-15 credits)	The course evaluates the knowledge gained as a result of completing a mandatory environmental health internship with a local, state, federal, tribal, or public/private organization (foundation, nonprofit, NGO). The field internship is a minimum of 400 hours with a dedicated supervisor who provides a final evaluation of the student. The internship is intended to provide students, majoring in Environmental Health, with an opportunity to use the knowledge and skills learned in the classroom in an actual work setting. This knowledge is evaluated through weekly journals, published blog posts, an updated resume, or a final report and/or poster.

2) Include examples of student work that relate to the cumulative and experiential activities.

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\2. Bachelors D9-13\D12.2.

3) Briefly describe the means through which the school implements the cumulative experience and field exposure requirements.

Public Health-Global Health Service-Learning Capstone (SPH 491/492: Capstone I/II)

- The culminating capstone experience uses a service-learning approach in which students synthesize their academic learning and apply it at a capstone service-learning site via reflective practice, group work, and a final culminating paper.
- Students (in teams of two or more) complete 50 hours of service over two quarters at their local service-learning site, supported by the capstone course. Students participate in class discussion and complete group assignments linked to their service site. Coursework challenges students to integrate what they have learned throughout their time in the major and apply it in the field.
- Logistics: The PH-GH program partners with the [UW Carlson Center](#). Students select a service site from a wide list of approved partner sites. The Carlson Center helps students pick a site that not only supports their personal learning goals but also the learning goals of their classmates.
- In the classroom, students are asked to identify the public health theories and frameworks that undergird the programmatic work at their site and provide a rationale for their thinking. They also share how they are experiencing and learning from the challenges and structural issues that adversely influence the health of vulnerable populations.
- Students write reflection papers and a final culminating paper that includes: 1. a literature review of a public health issue faced by the people served at their capstone service-learning site; 2. an easy to understand information graphic that uses data visualization software; and 3. a program or advocacy intervention that has the potential to address the issue at hand.
- Service learning sites in the time of COVID-19: during Spring Quarter 2020, 158 graduating seniors had finished 15-20 hours of service learning and half of their final capstone papers. While SPH was able to transition 66 in-person placements to a distance learning format, 92 other placements were lost due to a State-wide lockdown. To accommodate all students, PH-GH waived the 50-hour service learning requirement, included additional professional development skills, and transitioned the course from a “traditional service learning model” (course and service in person) to an “extreme e-service learning model” where both the course and the service was conducted online. Grading rubrics were co-developed by the instructor and the student in support of an adult learning and professional development approach. The new 92 placements were established by creating new partnerships and reimagining established partnerships by leveraging the teaching team’s community connections.

SPH 495: Public Health Internship, is required for Health Education and Promotion option (150 hours minimum, and 5 credits), providing additional field experience. It is also available as an elective for other majors, with variable hours

- In preparation for the internship, students are guided by an academic advisor, are required to complete a resume workshop through the UW Career & Internship Center, attend leadership events through the UW Husky Leadership Initiative, diversity trainings, and/or cultural events around Seattle. Additional resources include: UW Handshake (career management tool used in the Career & Internship Center), the SPH opportunities pages, the SPH Undergraduate Blog, PH-GH advisers, peers, and SPH alumni.

ENV H 482: Environmental Health Internship

- This field internship is intended to provide students, majoring in environmental health, with an opportunity to use the knowledge and skills learned in the classroom in an actual work setting. It is intended to be both practical and educational. Students are expected to devote their full-time efforts to the internship in order to gain an understanding of, and an appreciation for, the multiplicity of technical, legal, social, economic, and political factors which impinge upon the planning, development, and implementation of environmental health programs to understand and help resolve community problems.
- The internship is a minimum 400-hour practice experience in which students work with an agency for the purpose of being trained through observations, instruction, and practice, in the conduct of environmental health programs in the community.
- Each student works with a local, state, federal, or private agency. The field training internship may be taken any academic quarter, although most students enroll in the courses during Summer Quarter, between junior and senior years or following their senior year. The field training normally begins on the first day of the quarter and ends upon the completion of ten full weeks of training (unless other arrangements are agreed upon between the student and his/her agency supervisor), and approved in advance by the course coordinator.

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.

Public Health-Global Health Service Learning Capstone has these resources:

- Carlson Center Service-Learning resource: <https://www.washington.edu/carlson/students-3/browse-service-learning-positions/>.
- Internship Application: <https://sph.washington.edu/phgh/experiential/internship>.

Environmental Health Required Internship:

Students and internship supervisors have access to the department's Internship Manual, which includes guidelines, expectations, and responsibilities, as well as a copy of the final evaluation form. This manual, as well as other resources, are published on the internal student web site, on the Environmental and Occupational Health Sciences Internship Portal Page. Once hired, students complete the Internship Work Plan Form and submit it while they register for the internship course (ENV H 482: Environmental Health Internship). During the class, the students complete weekly journals, as well as a mid-term evaluation and final report, as outlined in the syllabus. The final report can include a written paper or poster, and includes summaries of their activities, as well as a critical analysis of how they applied their environmental health coursework in the field. Students also write and publish blog entries about their internship experiences. At the end of the internship, the supervisor evaluates the student using an online evaluation (included in the manual) and the student evaluates their internship using the Student Internship Evaluation Manual.

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\2. Bachelors D9-13\D12.4.

D13. Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences

- 1) Briefly describe, in the format of Template D13-1, of the manner in which the curriculum and co-curricular experiences expose students to the concepts identified.

Public Health-Global Health Bachelor of Arts and Bachelor of Science

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	SPH 480: class material focuses on research conducted at various scales and levels of society SPH 481: teaching, readings SPH 489: large group discussion and small group activity exploring anti-racist approaches to public health, including system and policy changes SPH 491/492: career development workshops
Community dynamics	SPH 380: government and non-government public health infrastructure is the focus of class materials and assignments SPH 381: cover environmental justice in depth as a topic SPH 491/492: stakeholder interview and agency overview assignments require students to evaluate community dynamics
Critical thinking and creativity	SPH 380: critical thinking required for all assignments, Public Service Announcement and op-ed assignments create space for creativity in material presentation SPH 480: this is required for assignments 1-3, which include a literature review, concept paper, and a quantitative survey; these assignments are all tailored to the individual student's assignment track and chosen study design, and require both critical thinking and creativity to complete SPH 481: policy brief SPH 489: large group discussion and activity exploring the value of creative thinking to come up with solutions to public health problems and individual thinking patterns that undermine health
Cultural contexts in which public health professionals work	SPH 481: guest lecture, blog commentary SPH 489: large group discussion about white organizational culture and other ways to approach public health work SPH 491/492: agency overview; infographics about the population served by the agency
Ethical decision making as related to self and society	SPH 481: response to readings SPH 489: small and large group discussions about our individual relationships with racism and how racism affects health and professional decision making
Independent work and a personal work ethic	SPH 380: individual assignments

Concept	Manner in which the curriculum and co-curricular experiences expose students to the concepts
Networking	SPH 481: stakeholder interview SPH 491/492: advising; career development workshops; alumni panels
Organizational dynamics	SPH 380: course materials and assignments require students to evaluate governmental and non-governmental organization roles; EMS assignment assesses ability to evaluate relationships between agencies SPH 481: guest lectures talk about healthy policy and health impact reviews in relation to state government
Professionalism	SPH 381: grant writing assignment (2018), environmental justice presentation (2019) SPH 481: 3-minute stakeholder presentation and stakeholder interview SPH 491/492: evaluation of students by the agency; advising; career development workshops
Research methods	SPH 380: introduced to literature review assessed with annotated bibliography assignment SPH 381: cover this through the grant writing assignment SPH 480: covers the breadth of both discovery and implementation science, including both quantitative and qualitative methods
Systems thinking	SPH 380: analyse relationships between agencies within community, local and global SPH 480: includes several weeks focused on implementation science/systems thinking; review multiple methodologies and strategies for implementing and evaluating interventions SPH 481: 'but why' and systems mapping exercise SPH 489: large and small group activities focused on identifying and analyzing societal systems and their relationships to the social determinants of health

Concept	Manner in which the curriculum and co-curricular experiences expose students to the concepts
Teamwork and leadership	SPH 380: active learning classroom creates environment for in-class team work at tables SPH 480: all students work in small groups throughout the quarter on daily worksheets that align with class material SPH 481: group projects, policy brief, presentation SPH 489: multiple team-based activities as well as a stated call for students to continue and lead conversations and work around health equity
<i>courses referenced above</i>	SPH 380: History and Practice of Public Health SPH 381: Science and Public Health SPH 480: Research Methods in Public Health SPH 481: Ethics, Social Justice, and Policy in Public Health SPH 489: Structural Racism in Public Health SPH 491: Public Health Capstone SPH 492: Public Health Capstone II

Environmental Health Bachelor of Science

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	Students have the opportunity to participate in the student-run environmental health organization; in 2019-20, the focus was on reducing Tobacco use on campus
Community dynamics	Students learn theoretical concepts of community dynamics through ENV H 311, 472, 320, and 473, but are then asked to apply their acquired knowledge in their internship ENV H 482
Critical thinking and creativity	There are many opportunities in core classes where students are asked to synthesize what they have learned and approach solutions/communication creatively: Example ENV H 311, climate change synthesis assignment challenges students to think critically about the effects of climate change on health, connect with a chosen audience, and communicate through a creative story-telling process when designing an elevator pitch

Concept	Manner in which the curriculum and co-curricular experiences expose students to the concepts
Cultural contexts in which public health professionals work	In ENV H 473, students are required to attend a public meeting to analyze the community context in which public health practitioners operate; there are also three lectures (structure of environmental health practice 1, 2, 3) that review and discuss the structure and function of federal, state, and local health departments and their workforces; students engage in discussions about the composition of the workforce (e.g., race and age) and whether or not that is reflective of who lives in the community and why that's important; they also review the NACCHO Local Health Department Profile report and complete an in-class assignment where they learn about the composition of the local public health workforce and function of local health departments, and discuss how cultural context (e.g., rural vs. urban) influences local health department activities; finally, through their Environmental Health Assessment Activity, a multi-class activity, they assess characteristics that influence a community's capacity to undertake an environmental health assessment, describe, and characterize the community in which they are working, and discuss how and why community members should be engaged in environmental health assessments and activities
Ethical decision making as related to self and society	Ethical decision making is discussed throughout the core classes, including ENV H 311, 472, 473, and in their internship prep class (ENV H 480); ethical decision making is then exercised by students during their internship experience (ENV H 482)
Independent work and a personal work ethic	During their internship (ENV H 482), students have the opportunity to learn about effective teamwork as well as independent work; most internships include several weeks of shadowing and onboarding with their new teams, followed by the opportunity to perform independent work under supervision or initiate an independent special project for the organization; prior to starting the internship, the student and internship supervisor complete a Scope of Work plan outlining their regular duties as well as any projects and deliverables
Networking	During their internship (ENV H 482), students are asked to complete and summarize an informational interview with a professional in their internship organization; they are also prepped on how to network through discussions and assignments in ENV H 480
Organizational dynamics	During their internship (ENV H 482), students are asked to identify the organizational chart, mission statement, and provide a written statement addressing how their internship contributes to the larger context of the organization and within environmental public health more broadly

Concept	Manner in which the curriculum and co-curricular experiences expose students to the concepts
Professionalism	Prior to the start of the internship, students learn about professionalism during their required internship preparation course (ENV H 480), where they learn how to write professional emails and troubleshoot workplace conflicts, and present themselves on professional social media platforms like LinkedIn; they then apply this preparation in their internship experience (ENV H 482)
Research methods	Because this is an applied STEM degree, research methods are covered throughout the core curricula: ENV H 311, 320, 432, 433, 472; some students may apply research methods in their internship experience, both qualitative and quantitative or through independent study research projects with faculty
Systems thinking	During their internship (ENV H 482), students are asked to reflect and provide a written statement addressing how their internship contributes to the larger context of the organization and within environmental public health more broadly
Teamwork and leadership	Team projects are included in a number of our core courses: ENV H 311, 320, 472, 473; while in their internship (482), students operate as part of a professional team and have an opportunity to reflect on the importance of leadership through required blog posts and journal reflection assignments
<i>courses referenced above</i>	ENV H 311: Introduction to Environmental Health
	ENV H 320: Introduction to Technical Communication in Environmental Health
	ENV H 432: Chemical Sampling and Analysis
	ENV H 433: Microbiological Sampling and Analysis
	ENV H 472: Environmental Risks and Society
	ENV H 473: Environmental Health Policy and Practice
	ENV H 480: Undergraduate Seminar
	ENV H 482: Environmental Health Internship

- 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.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\2. Bachelors D9-13\D13.2.

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

Strengths

Public Health-Global Health

- Throughout the curriculum, students work collaboratively to test hypotheses, analyze health disparities, and develop interventions that are culturally relevant, feasible, and effective at promoting health in communities. The PH-GH program core faculty believe that the curriculum is extremely effective in instilling Critical Thinking and Creativity, a Systems Thinking mindset, Team and Leadership principles, as well as Advocacy skills in our students. The PH-GH faculty and staff continue to focus on strengthening the experiences of students with regards to Networking and Community Dynamics.

Environmental Health

- Over the past three years, the required internship program has changed significantly to support students as they develop professional, organizational, networking, and leadership skills. The internship preparation class and internship class were redesigned together to create a seamless experience as students explore the professional field, develop application materials, apply, and interview for internships, and complete and reflect on these internships. Student feedback is solicited at multiple points during the two classes, and students complete a career confidence and readiness assessment at three points: before and after the preparation class, and at the end of their internship. By evaluating student progress in this way, the instructor is able to adapt the course in real-time to address student needs. As a result, two new programs were recently piloted: an internship "buddy" peer mentoring program, as well as an alumni mentoring program that connects undergraduates to local professionals. Both of these programs have a small number of participants, but Environmental Health plans to expand them over the next several years.
- To support students as they make connections between coursework and internship activities, students now have the option to create an academic poster as a final project for the internship course; this assignment is drawn from the abstract submission guidelines for the School's undergraduate symposium. By making this change, along with new promotional and incentivizing efforts, the department hopes to support more students as they apply to present at academic symposiums and conferences.

Plans for improvement

Public Health-Global Health

- The program plans to increase student engagement with networking and career development opportunities by: piloting an opt-in mentorship program between graduate and undergraduate public health students, implementing co-curricular programming focused on networking and professionalism skills (e.g., communication of skill sets, resume development, negotiating salary), and by increasing the number of opportunities for current students to connect with alumni networks.

D14. MPH Program Length

- 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 typical program length for all MPH degrees is two years, or seven quarters (maximum program length is six years, as described in Criterion B2). Number of credits per degree is noted in the below table. MPH Environmental and Occupational Health: One Health has more credits than other programs in part because of its required breadth of topics in human and animal health, and their places of intersection.

Degree	Number of Credits to Completion
<i>State-supported</i>	
Environmental and Occupational Health	63
Environmental and Occupational Health: Occupational Medicine Residency	68
Environmental and Occupational Health: One Health	75
Epidemiology: General	63
Epidemiology: Global Health	63
Epidemiology: Maternal and Child Health	63
Global Health: General	63
Global Health: Health Metrics and Evaluation	63
Health Services: General	63
Health Services: Health Systems and Policy	63
Health Services: Social and Behavioral Sciences	63
Public Health Nutrition	64 or 67
Public Health Genetics	63
<i>Fee-based</i>	
Health Services: Community-Based Public Health Practice	63
Online Master of Public Health	63

- 2) **Define a credit with regard to classroom/contact hours.**

The University of Washington uses a quarter system for its educational programs and has defined criteria for classroom/contact hours. From the UW web page, this is noted as being:

An approximate guideline for determining the number of credits is as follows: 1 credit per hour of weekly instruction and 2 hours of outside contact with the material. The 2:1 ratio of outside class work to in-class hours, however, is merely a guideline and may be altered as needed, according to the dictates of the course. The total number of hours per week that the student has in contact with the class material should not vary widely from 3 hours per credit:

<https://registrar.washington.edu/curriculum/assigning-credit/>.

SPH follows UW policies in this regard.

D15. DrPH Program Length

This section not applicable to this School of Public Health.

D16. Bachelor's Degree Program Length

- 1) **Provide information about the minimum credit-hour requirements for all 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.**

Credits Required

To be eligible for graduation from the University of Washington with the baccalaureate degree, a student must satisfy all other specific requirements and must complete a minimum of 180 academic credits. SPH follows UW policy in this regard.

Reference:

- Registrar: https://www.washington.edu/students/gencat/front/Requirements_BA.html
- Undergraduate Academic Affairs (UAA): <https://www.washington.edu/uaa/advising/academic-planning/terms-and-policies/#C>
- Public Health-Global Health Major: <https://sph.washington.edu/phgh/requirements>
- Environmental and Occupational Health Sciences: <https://www.washington.edu/students/gencat/academic/envh.html>

- 2) **Define a credit with regard to classroom/contact hours.**

As stated in D14, the University of Washington defines the criteria for classroom/contact hours. From the UW web page, this is noted as being:

An approximate guideline for determining the number of credits is as follows: 1 credit per hour of weekly instruction and 2 hours of outside contact with the material. The 2:1 ratio of outside class work to in-class hours, however, is merely a guideline and may be altered as needed, according to the dictates of the course. The total number of hours per week that the student has in contact with the class material should not vary widely from 3 hours per credit.

<https://registrar.washington.edu/curriculum/assigning-credit/>

SPH follows UW policy in this regard.

- 3) **Describe policies and procedures for acceptance of coursework completed at other institutions, including community colleges.**

General Policy

To students pursuing a first bachelor's degree, the UW Office of Admissions awards transfer credit according to the guidelines provided here, with the proviso that Admissions reserves the right to accept or reject credits earned at other institutions of higher education. In general, it is University policy to accept credits earned at institutions fully accredited by their regional accrediting association for colleges and universities, provided that such credits have been earned through university-level courses appropriate to the student's degree program at the University of Washington. Exceptions are noted under *Courses Receiving No Credit* and *Notable Restrictions on Transfer Credit*.

Links to applicable policies are included below:

- [Washington Community & Technical College Transfer](#)
- [State Policy on Inter-College Transfer and Articulation](#)
- [Class Standing](#)

- [Quarter vs. Semester Credits](#)
- [Applying Transfer Credit to Degree Requirements](#)
- [Transfer Credit Evaluation](#)
- [Courses Receiving No Credit](#)
- [Notable Restrictions on Transfer Credit](#)
- [Military Credit](#)
- [Prior Learning Assessment](#)
- [UW Reverse Transfer Program](#)

SPH follows UW policies in this regard.

4) If applicable, provide articulation agreements with community colleges that address acceptance of coursework.

The UW subscribes to the State-wide policy on Inter-College Transfer and Articulation among Washington Public Colleges and Universities, endorsed by the public colleges and universities of Washington, as well as by the State Board for Community and Technical College Education, and adopted by the Higher Education Coordinating Board. The policy deals with the rights and responsibilities of students, and the review and appeal process in transfer-credit disputes.

Reference: <https://admit.washington.edu/apply/transfer/policies/#state-policy>

SPH follows UW policies in this regard.

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.

Anthropology with an option in Medical Anthropology and Global Health

Bachelor of Arts degree with a major in anthropology, with options in medical anthropology and global health (MAGH):

- 55 credits for major; remainder of credits as general education

Bachelor of Science degree with a major in anthropology, with options in medical anthropology and global health (MAGH):

- 75 credits

Reference: <https://www.washington.edu/students/gencat/academic/anth.html>

Nutritional Sciences offers the following undergraduate programs

A bachelor of arts in food systems, nutrition, and health

- 84-85 credits

Reference: <https://www.washington.edu/students/gencat/academic/nutr.html>

D17. Academic Public Health Master's Degrees

1) List the curricular requirements for each relevant degree in the unit of accreditation.

The curricular requirements for each Master of Science (MS) degree option in the SPH are listed below. More detail can be found on the individual departmental and program web sites (links follow each list):

Biostatistics

The *MS: Biostatistics* (63 credits) offers in-depth training in the tools of statistics for students who wish to pursue a doctoral degree or who desire a career as a biostatistician in a research position in biomedical, clinical, and laboratory settings. The degree may be tailored to the student's specific interests through elective coursework and the thesis. In preparation for work on the thesis, students are expected to master computational skills.

MS: Biostatistics	Minimum
Core requirements	35 credits
BIOST 514: Biostatistics I	4
BIOST 515: Biostatistics II	4
BIOST 536: Categorical Data Analysis in Epidemiology	4
BIOST 537: Survival Data Analysis in Epidemiology	4
STAT 512: Statistical Inference	4
STAT 513: Statistical Inference	4
Six quarters of BIOST 580: Seminar in Biostatistics	6
BIOST 590: Biostatistical Consulting	3
BIOST 504: Foundations of Public Health for Biostatistics	2
Electives	12 credits
Methodological emphasis (choose two courses)	6
Biology or Public Health emphasis (choose two courses)	6
Thesis	18 credits

<https://www.biostat.washington.edu/academics/ms/thesis/courses>

The *MS: Biostatistics Capstone* (50 credits) is a program that students can complete in 18 months. The degree is designed for students who wish to enter the job market upon graduation, as a biostatistician, developing and applying statistical methods to biomedical and health data. The pathways students choose from are: Data Science, Statistical Genetics, and Modeling and Methods.

MS: Biostatistics Capstone	Minimum
Core requirements	30 credits
BIOST 514: Biostatistics I	4
BIOST 515: Biostatistics II	4
BIOST 522: Statistical Inference for Biometry I	4
BIOST 523: Statistical Inference for Biometry II	4
BIOST 561: Computational Skills for Biostatistics I	2
BIOST 579: Data Analysis and Reporting	2
BIOST 504: Foundations of Public Health for Biostatistics	2
BIOST 596: Biostatistics Capstone I: Project Planning	3
BIOST 597: Biostatistics Capstone II: Project Implementation	3
Writing and Presentation Skills for Biostatistics	2
Pathway-specific credits	20 credits
Capstone	6 credits

<https://www.biostat.washington.edu/academics/ms/capstone/courses>

Environmental and Occupational Health Sciences

There are six distinct MS degrees offered by the Department of Environmental and Occupational Health Sciences.

- Environmental Health
- Environmental and Occupational Health: Exposure Sciences
- Environmental and Occupational Health: Occupational Hygiene
- Environmental and Occupational Health: Applied Occupational Hygiene
- Environmental Toxicology
- Environmental and Occupational Health: Applied Toxicology

The *MS: Environmental Health* (58 credits) trains students to identify, evaluate, and control exposures to chemical and microbial contaminants in air, water, soil, and food. The curriculum includes courses in the supporting sciences of biostatistics and epidemiology, as well as foundational courses in exposure science, toxicology, and risk assessment.

MS: Environmental Health	Minimum
Core requirements	20 credits
Choose BOST 511: Medical Biometry I or BOST 517: Applied Biostatistics I	4
EPI 511: Introduction to Epidemiology	4
ENV H 501: Foundations of Environmental and Occupational Health	4
ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
ENV H 583: Thesis Research Proposal Preparation	2
Three quarters of ENV H 580: Environmental & Occupational Health Seminar	2
Degree Option Specific requirements	17 credits
ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	4
ENV H 541: Ecology of Environmental Transmitted Microbial Hazards	3
ENV H 552: Environmental Chemistry of Pollution	4
Two of three topic areas: Waste Management; Air Pollution; Water and Wastewater	6
Electives	12 credits
students select in consultation with their faculty advisor	12 min.
Thesis, including prep	9 credits

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MS_EH.pdf

The MS in Environmental and Occupational Health: Exposure Sciences and the MS in Environmental and Occupational Health: Occupational Hygiene are both 2-year degrees that require a thesis as a culminating experience. Additionally, the MS in Environmental and Occupational Health: Applied Occupational Hygiene is an accelerated 5-quarter degree that requires a project/portfolio as a culminating experience.

The *MS in Environmental and Occupational Health: Exposure Sciences* (59 credits) is a two-year (21-month) research-based degree program. The curriculum includes courses in the supporting sciences of biostatistics and epidemiology, as well as foundational courses in exposure science and environmental health.

MS: Environmental and Occupational Health: Exposure Sciences	Minimum
Core requirements	20 credits
Choose BIOST 511: Medical Biometry I or BIOST 517: Applied Biostatistics I	4
EPI 511: Introduction to Epidemiology	4
ENV H 501: Foundations of Environmental and Occupational Health	4
ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
Choose ENV H 583: Thesis Research Proposal Preparation	2
Three quarters of ENV H 580: Environmental & Occupational Health Seminar	3
Degree Option Specific requirements	15 credits
BIOST 512: Medial Biometry II or BIOST 518: Applied Biostatistics II	4
ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	4
ENV H 553: Environmental Exposure Monitoring Methods	4
ENV H 557: Exposure Controls	3
Electives	15 credits
students select in consultation with their faculty advisor	15 min.
Thesis, including prep	9 credits

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MS_ES.pdf

The *MS in Environmental and Occupational Health: Occupational Hygiene* (63 credits) is similar to the above, but additional coursework provides training in occupational and environmental disease; exposure monitoring, measurement, and control; and occupational health and safety management.

MS: Environmental and Occupational Health: Occupational Hygiene	Minimum
Core requirements	20 credits
Choose BIOST 511: Medical Biometry I or BIOST 517: Applied Biostatistics I	4
EPI 511: Introduction to Epidemiology	4
ENV H 501: Foundations of Environmental and Occupational Health	4
ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
Choose ENV H 583: Thesis Research Proposal Preparation	2
Three quarters of ENV H 580: Environmental & Occupational Health Seminar	3
Degree Option Specific requirements	31 credits
BIOST 512: Medial Biometry II or BIOST 518: Applied Biostatistics II	4
ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	4
ENV H 550 Occupational and Environmental Disease	3
ENV H 553: Environmental Exposure Monitoring Methods	4
ENV H 555: Instrumental Methods for Industrial Hygiene Measurement: Laboratory	3
ENV H 557: Exposure Controls	4
ENV H 560: Occupational Safety Management	4
ENV H 564: Recognition of Health and Safety Problems in Industry	2
ENV H 590: Selected Topics (Health and Safety of Physical Agents in the Workplace)	3
Electives	3 credits
students select in consultation with their faculty advisor	3 min.
Thesis, including prep	9 credits

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MS_OHy.pdf

The accelerated path to the *MS: Environmental and Occupational Health: Applied Occupational Hygiene* (55 credits) degree is designed for students who plan to pursue careers as industrial hygiene practitioners, and who have prior experience in the fields of Industrial Hygiene or Health and Safety. Fewer biostatistics or biometry credits are required (4 instead of 8) and a portfolio and internship (6 credits) replaces the thesis. https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MS_AOHy.pdf

The MS in Environmental Toxicology is a 2-year degree that requires a thesis as a culminating experience. Additionally, the MS in Environmental and Occupational Health: Applied Toxicology is an accelerated 5-quarter degree that requires a project/portfolio as a culminating experience. The field of Toxicology is focused on developing improved ways to identify and reduce the harmful effects of chemical, physical, and biological agents at all levels of biological organization, from molecules to humans to complex ecosystems.

The *MS in Environmental Toxicology* (63 credits) trains students to identify, understand, and analyze toxic agents and their effects on human health and the environment. The curriculum includes courses in the supporting sciences of biostatistics and epidemiology, as well as foundational courses in exposure science and environmental health. Additional courses provide in-depth training in risk assessment and the fundamentals of toxicology, including organ system toxicology and the effects and mechanisms of toxicity of a wide range of toxic agents.

MS: Environmental Toxicology	Minimum
Core requirements	20 credits
BIOST 511: Medical Biometry I	4
EPI 511: Introduction to Epidemiology	4
ENV H 501: Foundations of Environmental and Occupational Health	4
ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
ENV H 583: Thesis Research Proposal Preparation	2
Three quarters of ENV H 580: Environmental & Occupational Health Seminar	3
Degree Option Specific requirements	30 credits
ENV H 514: Fundamentals of Toxicology	3
ENV H 515: Organ System Toxicology	3
ENV H 516: Toxic Agents: Effects and Mechanisms	3
ENV H 591: Current Topics in Toxicology	2-4
ENV H 593: Current Topics in Risk Assessment	2-4
ENV H 600: Independent Study or Research	9
Choose two courses (min. 6 credits) from: ENV H 531: Neurotoxicology; ENV H 532: Reproductive and Development Toxicology; ENV H 533: Molecular Toxicology; ENV H 534: Biochemical Toxicology of the Puget Sound; ENV H 577: Risk Assessment for Environmental Health Hazards	6
Electives	4 credits
students select two in consultation with their faculty advisor	4 min.
Thesis, including prep	9 credits

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MS_ET.pdf

The 5-quarter, 15-month accelerated *MS in Environmental and Occupational Health: Applied Toxicology* (59 credits) degree option was developed for students looking for training in the practice of Toxicology in order to be able to compete for jobs in private industry, federal, state, or local government agencies, or academic institutions that require an MS degree. Students in this degree option complete the same course requirements as students in the *MS in Environmental Toxicology*, but conduct a supervised field study project at a training site (e.g., Region 10 EPA (Environmental

Protection Agency), NOAA (National Oceanic Atmospheric Administration), Public Health-Seattle & King County, Veritox, and local biotechnology companies) during Summer Quarter of their first year instead of writing a research thesis as a culminating experience. Portfolio and field studies credits total 15, but the independent study credits are not required.

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_MS_AT.pdf

Epidemiology

The *MS in Epidemiology: General* (60 credits) offers in-depth training in epidemiologic methods for students preparing for a research-focused career. The degree may be tailored to the student's specific interests through elective coursework and the thesis.

MS: Epidemiology: General	Minimum
Core requirements	27 credits
BIOST 511, 512, 513 series: Medical Biometry I-III or BIOST 517, 518 series: Applied Biostatistics I-II	12 or 8
EPI 512: Epidemiologic Methods I	4
EPI 513: Epidemiologic Methods II	4
EPI 510: Epidemiologic Data Analysis	3
EPI 514: Application of Epidemiologic Methods	5
EPI 583: Epidemiology Seminar (minimum three quarters)	3
Electives	10 credits
Three EPI electives of which one must be disease/exposure focus	6
Two SPH courses or other graduate courses with significant public health content	4
Additional electives; students select in consultation with their faculty advisor	var
Thesis	9-18 credits

<https://epi.washington.edu/ms-students>

The *MS in Epidemiology: Clinical and Translational Research* (60 credits) is chiefly intended for (but not limited to) health professionals who have already completed clinical training and who plan to conduct research with patients in health care settings as a significant part of their future career. The track builds on the MS program in Epidemiology, adding several specific course requirements particularly relevant to clinical and translational research.

MS: Epidemiology: Clinical and Translational Research	Minimum
Core requirements	35 credits
BIOST 511, 512, 513 series: Medical Biometry I-III or BIOST 517, 518 series: Applied Biostatistics I-II	12 or 8
BIOST 524: Design of Medical Studies	3
EPI 512: Epidemiologic Methods I	4
EPI 513: Epidemiologic Methods II	4
EPI 510: Epidemiologic Data Analysis	3
EPI 514: Application of Epidemiologic Methods	5
EPI 542: Clinical Epidemiology	2
EPI 573: Methods and Issues in Using Biological Measurements in Epidemiologic Research	3
EPI 583: Epidemiology Seminar (minimum three quarters)	3
Research Ethics requirements	
BRI lecture series or BH 536: Research Ethics and Regulation	0 or 3
Electives	8 credits
One EPI electives with disease/exposure focus or one translational elective	2 min
Additional SPH electives; students select in consultation with their faculty advisor	6 min
Thesis	9 -18 credits

https://epi.washington.edu/sites/default/files/ms_epi_clin_transl_research_checklist_2019.pdf

Health Services

The *MS in Health Services: General* (63 credits) is an in-residence, 2-year, graduate degree program that offers analytical and practical knowledge and skills to candidates who have some experience in health fields and who want to assume positions of greater responsibility in improving the public's health and the effectiveness of health care and population health services.

MS: Health Services: General	Minimum
Core requirements	26 credits
BIOST 511, 512, 513 series: Medical Biometry I-III or BIOST 517, 518 series: Applied Biostatistics I-II	12 or 8
EPI 512: Epidemiologic Methods I	4
EPI 513: Epidemiologic Methods II	4
HSERV 511: Introduction to Health Services and Public Health	3
HSMGMT 514: Health Economics	5
HSERV 592: Program Seminars (two quarters)	2
Health Services Research Methods Electives	6 credits
students select two in consultation with their faculty advisor	6
Other electives	22 credits
Students select in consultation with their faculty advisor	
Thesis	9 credits

<http://depts.washington.edu/hservms/curriculum>

The *Health Services: Clinical and Translational Research* (63 credits) option of the MS is designed to provide students with a solid foundation in clinical and translational research methods as well as related competencies such as grant writing, ethical research conduct, and leadership. Students who complete this concentration will have met core competencies established by the National Center for Advancing Translational Sciences, making this concentration an excellent option for scholars involved in Clinical Translational Sciences Awards (CTSA) programs. Students must satisfy the core MS requirements for the SPH and Department of Health Services (above), as well as the additional requirements listed below, that substitute for some or all of the elective courses.

MS: Health Services: Clinical and Translational Research	Minimum
Additional requirements	9 credits
HSERV 590: Selected Topics in Health Services (Leadership Seminar)	1 to 3
HSERV 600: Independent Study (Biomedical Research Integrity Program)	1 to 10
One of HSERV 514: Social Determinants of Health and Health Disparities HSERV 555: Health Disparities HSERV 548: Research Methods for Social and Contextual Determinants of Health HSERV 581: Strategies of Health Promotion	2 to 4
Two of HSERV 583: Economic Evaluation in Health and Medicine HSERV 584: Assessing Outcomes in Health and Medicine HSERV 578: Preparing, Writing, and Critiquing Scientific Research Proposals HSERV 527: Survey Research Methods HSERV 523: Advanced Health Services Research Methods I: Large Public Databases; Big Data HSERV 521: Advanced Qualitative Methods in Anthropology and Public Health	5
Optional: BIME 530: Introduction to Biomedical and Health Informatics	3 credits

Additional Electives: Students select in consultation with their faculty advisor	0 to 10
Thesis	9 credits

<https://depts.washington.edu/hservms/thesis>)

Nutritional Sciences

The *MS in Nutritional Sciences* (46 credits) offers an interdisciplinary course of study with a strong grounding in the research and evidence-base of nutritional sciences. The MS in Nutritional Sciences provides an advanced understanding of human nutrition, research methods, and evidence-based approaches to promoting individual nutrition health. Historically, the MS degree program has prepared students for employment in research groups, or for continuing on to the PhD degree program. Recently, there has been increasing student interest in the emerging field of food systems. Food systems training is distinct from classical nutrition training in its holistic vision of the food supply chain, from production to consumption, and how levers of change at any point within and/or around the food system can contribute to changes in nutrition and health outcomes. Elective courses across campus can be taken and new food systems courses are being added within the Nutritional Sciences program.

Students may also complete coursework for a Registered Dietitian Nutritionist (RDN) credential (additional 42 credits) by completing the additional Graduate Coordinated program in Dietetics (GCPD). Graduates from the combined MS/GCPD program are regarded as highly skilled and competitive candidates for dietetics practice and leadership roles in clinical care and community settings. The program's location in an accredited School of Public Health lends a systems perspective to the curriculum and teaching philosophy, and supports strong linkages with state and local public health agencies and programs.

MS: Nutritional Sciences	Minimum
Core requirements	37 credits
BIOST 511: Medical Biometry	4
EPI 511: Introduction to Epidemiology	4
HSERV 579: Structural Racism and Public Health	1
NUTR 520: Nutrition and Metabolism I	4
NUTR 521: Nutrition and Metabolism II	4
NUTR 512: United States Food Systems Policy	3
NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	2
NUTR 514: Sustainable Food Systems for Population Health	3
NUTR 526: Maternal and Pediatric Nutrition	4
NUTR 531: Public Health Nutrition	3
NUTR 562: Nutrition and Chronic Disease	4
NUTR 500: Food Systems, Nutrition, and Health Seminar	1
Additional GCPD specific course requirements	12 credits
NUTR 561: Graduate Coordinated Program in Dietetics	1
NUTR 536: Nutrition Education Principles and Practice	2
NUTR 560: Nutrition Counseling for Chronic Disease	2
NUTR 563: Nutrition in Acute Care	4
NUTR 559: Orientation to Clinical Dietetics Practice	3
Electives	5 credits
One to two electives; students select in consultation with their faculty advisor	5 min
Capstone or thesis, including prep	4-9

GCPD specific practice requirements	30 credits
Supervised Practice	30 min

<https://nutr.uw.edu/graduate/ms/curriculum/>

Public Health Genetics

The *MS in Genetic Epidemiology* (63 credits) was one of the first such programs to be developed in the United States. Training in genetic epidemiology focuses on methods to identify genetic diseases and their interactions with environmental exposures in populations. The program emphasizes applied research skills.

MS: Genetic Epidemiology	Minimum
Core requirements	40 credits
PHG 511: Genetic Epidemiology	3
PHG 519: Statistical Methods in Genetic Epidemiology	3
STAT 550: Statistical Genetics I: Mendelian Traits	3
EPI 573: Methods and Issues in Using Biological Measurements in Epidemiologic Research	3
EPI 512: Epidemiologic Methods I	4
EPI 513: Epidemiologic Methods II	4
BIOST 517: Applied Biostatistics I	4
BIOST 518: Applied Biostatistics II	4
PHG 536: Bioinformatics and Gene Sequence Analysis, or GENOME 559: Introduction to Statistical and Computational Genomics and GENOME 552: Technologies for Genomic Analysis	3 or 4
PHG 512: Legal, Ethical, and Social Issues in Public Health Genetics	3
PHG 580: Interactive Seminar (6 quarters min)	6
Electives	14 credits
Thesis, including prep	9 credits

<http://iphg.biostat.washington.edu/programs/ms/required-courses>

- 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 will present a separate matrix for each degree school, but matrices may be combined if requirements are identical.

Content Coverage for Academic Public Health Master's Degree		Biostatistics: Masters in Science Biostatistics, Capstone: Masters in Science
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture drawn from CDC material. <u>Assessment Opportunity</u> : Week 10. Students write a term paper, synthesizing how public health foundations relate to a chosen health condition (a major cause of morbidity/mortality) and how an understanding of the foundations of public health will impact the student's work as a biostatistician.
2. Identify the core functions of public health and the 10 Essential Services*	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture on core functions, week 3. Lecture and video on 10 essential services. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material which introduces and applies the core functions of public health and the 10 Essential Services. (Pre-Quiz 2 Q1-6, Post-Quiz 2 Q1-2)
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Video and article on quantitative vs qualitative methods and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the role of quantitative and qualitative studies. (Pre-Quiz 3 Q1-5, Post-Quiz 3 Q1-3)
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 2. Video and readings on causes of mortality and lecture. <u>Assessment Opportunity</u> : Week 2. Students complete two quizzes with questions relating to assigned material on major causes and trends of morbidity and mortality in the US and China. (Pre-Quiz 1, Post-Quiz 1)
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 3. Lecture on primary, secondary, and tertiary prevention in population health. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material on primary, secondary, and tertiary prevention. (Pre-Quiz 2 Q7-10, Post-Quiz 2 Q3-5)
6. Explain the critical importance of evidence in advancing public health knowledge	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Article on the importance of evidence and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the importance of evidence in advancing public health knowledge. (Pre-Quiz 3 Q6-10, Post-Quiz 3 Q4-5)

Content	Course number(s) and name(s)	Describe specific assessment opportunity ^a
7. Explain effects of environmental factors on a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Videos and reading on air pollution and on environmental influences on health and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on effects of environmental factors on a population's health. (re-Quiz 4 Q1-5, Post-Quiz 4 Q1-2)
8. Explain biological and genetic factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Video on genetic and environmental influences on health, readings on biological and genetic factors and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on biological and genetic factors that affect a population's health. (Pre-Quiz 4 Q6-10, Post-Quiz 4 Q3-5)
9. Explain behavioral and psychological factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Videos on physical activity and cardiovascular health. and social determinants of health; lecture and discussion. <u>Assessment Opportunity</u> : Week 8. Students complete two quizzes with questions relating to assigned material on behavioral and psychological factors that affect a population's health. (Pre-Quiz 6 Q1-5, Post-Quiz 6 Q1-2)
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Readings on health and income inequality and discussion. <u>Assessment Opportunity</u> : Week 6. Students complete two quizzes with questions relating to assigned material on social, political, and economic determinants of health, and how they contribute to population health and health inequities. (Pre-Quiz 6 Q6-10, Post-Quiz 6 Q3-5)
11. Explain how globalization affects global burdens of disease	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Reading on globalization and health and lecture. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on how globalization affects global burdens of disease. (Pre-Quiz 7 Q1-5, Post-Quiz 7 Q1-2)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Readings on One Health and planetary health. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on the connections among human health, animal health, and ecosystem health. (Pre-Quiz 7 Q6-10, Post-Quiz 7 Q3-5)

Content Coverage for Academic Public Health Master's Degree	Environmental and Occupational Health, Applied Occupational Hygiene: Masters in Science Environmental and Occupational Health, Applied Toxicology: Masters in Science Environmental and Occupational Health, Exposure Sciences: Masters in Science Environmental and Occupational Health, Occupational Hygiene: Masters in Science Environmental Health: Masters in Science Environmental Toxicology: Masters in Science	
Content	Course number(s) and name(s)	Describe specific assessment opportunityⁿ
1. Explain public health history, philosophy and values	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. Lecture: EOH Approach, history of public health and environmental health. Reading: History of Public Health. <u>Assessment Opportunity</u> : Midterm and final. Questions on history of public and environmental health.
2. Identify the core functions of public health and the 10 Essential Services*	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Session 2. Assigned reading: Environmental Public Health Services. <u>Assessment Opportunity</u> : Midterm. Define core functions and 10 essential services.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants BIOST 511: Medical Biometry I or BIOST 517: Applied Biostatistics I	ENV H 502 <u>Didactic Opportunity</u> : Week 1-2. Lesson 3, 4. Application of exposure factors and questionnaires (Lecture topic lesson 3). Reading: USEPA exposure factor handbook (ch1, 2, 5; questionnaires and exposure assessment lecture (lesson 4, reading: ch 2.1-2.10, 5.1-5.2, and 5.4-5.10 in the textbook, "Exposure Assessment in Environmental Epidemiology"). <u>Assessment Opportunity</u> : Week 3. Homework #1 q#1: compare and contrast different questionnaires and assessment methods; q#2: quantitative application of exposure factors to different populations and individuals.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Section 16. Reading IHME Global Burden of Disease Risk Factor paper. In class lecture on Global Burden of Disease Study. <u>Assessment Opportunity</u> : Final. Questions about global burden of disease, including major causes and trends of morbidity and mortality.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	<u>ENV H 501</u> <u>Didactic Opportunity</u> : Session 2. EOH Approach: didactic presentation of Leavell's levels of prevention. <u>Assessment Opportunity</u> : Midterm and Final. Questions about levels of prevention.
6. Explain the critical importance of evidence in advancing public health knowledge	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	<u>ENV H 503</u> <u>Didactic Opportunity</u> : Week 8, Session 22. Lecture on heavy metals; evidence that removing lead from gasoline resulted in decreases in blood lead levels. <u>Assessment Opportunity</u> : Week 10. Final Exam question: what was the effect of the policy to remove lead from gasoline on population blood lead levels and describe the likely impact this has on IQ in children.
7. Explain effects of environmental factors on a population's health	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	<u>ENV H 503</u> <u>Didactic Opportunity</u> : Week 6, Session 16. Lecture on cardiopulmonary toxicology; effects of ambient air pollution on pulmonary and cardiovascular diseases; readings, Chapters 15, 16, 29 of the text (Casarett & Doull's Essentials of Toxicology, 3e). <u>Assessment Opportunity</u> : Week 7, Session 21. Second midterm. Question on the effects of air pollution (specifically traffic related air pollution and near roadway proximity) on the risk of cardiovascular diseases.
8. Explain biological and genetic factors that affect a population's health	ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	<u>ENV H 503</u> <u>Didactic Opportunity</u> : Week 2, Session 6. Factors that modify the response to toxicants (includes age/developmental status; sex; genetics; disease status; nutrition/diet/microbiome). Readings include Chapters 2. <u>Assessment Opportunity</u> : Week 3, Session 12. Midterm 1. Questions on the effects of genetic polymorphisms in biotransformation enzymes on the disposition of aromatic amines and urinary tract cancer; question on the impact of dietary cruciferous vegetables on induction of protective biotransformation enzymes and the risk of aflatoxin-induced liver cancer.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
9. Explain behavioral and psychological factors that affect a population's health	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 502 <u>Didactic Opportunity</u> : Week 1, 2. Lesson 3, 4. Application of exposure factors and questionnaires (Lecture topic lesson 3). Reading: USEPA exposure factor handbook (ch1, 2 & 5; questionnaires and exposure assessment lecture (lesson 1-4, reading: ch 1, 2.1-2.10, 5.1-5.2, and 5.4-5.10 in the textbook, "Exposure Assessment in Environmental Epidemiology"). <u>Assessment Opportunity</u> : Week 3. Homework #1 q#1: contrast questionnaires and assessment methods based on behavior; q#3: conduct quantitative application of exposure factors to different populations of children of different ages, with different activity levels (i.e. behaviors); q#4 Describe how different behaviors lead to exposure scenarios for anthrax. Final, q#3: provide a detailed population exposure assessment for either wood smoke or chemical exposures, that accounts for behavior and population factors (income, housing, water supply access, etc.) that may alter exposure.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 501 <u>Didactic Opportunity</u> : Session 3. Readings on environmental justice in Hawaii, lecture on Environmental Justice. <u>Assessment Opportunity</u> : Final group project: explain social political and economic aspects of an environmental problem. Example: 2019 student project on wildfires and workers.
11. Explain how globalization affects global burdens of disease	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Section 17. Reading: Lancet Planetary Health Report. <u>Assessment Opportunity</u> : Final. Questions about globalization and urbanization on global burden of disease.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. Didactic lecture on EOH approach, including One Health systems model. <u>Assessment Opportunity</u> : Week 4. Graded concept map #1: Yakima ground water- students need to consider human, animal, and environmental aspects.

Content Coverage for Academic Public Health Master's Degree		Epidemiology, General: Masters in Science □ Epidemiology, Clinical and Translational Research: Masters in Science
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity:</u> Week 5. Complete online training from the North Carolina Institute for Public Health (NCIPH) titled, "Values and Beliefs Inherent to a Public Health Perspective." <u>Assessment Opportunity:</u> Complete online post-training test and submit certificate of completion.
2. Identify the core functions of public health and the 10 Essential Services*	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity:</u> Week 5. Watch online lecture from the Centers for Disease Control titled "Introduction to Public Health" by Susie McCarthy on fundamental functions of public health and ten essential public health services. □ <u>Assessment Opportunity:</u> Week 5. In an individual homework assignment, identify 2 of the 10 essential services of public health agencies and describe how they influenced your life. If you do not think you have encountered the real-world application of these 10 essential services, describe 2 situations where you think they should have been present but were not.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	EPI 512: Epidemiologic Methods I EPI 583: Epidemiology Seminar	EPI 512: quantitative <u>Didactic Opportunity:</u> Week 1. A lecture and a textbook chapter reading cover the concept of "Diseases and Populations" and quantitative thinking in population health sciences. The critical importance of quantitative approaches to generate evidence, describe the burden of a health problem, and identify its determinants at the population level are discussed. In addition, the contribution of quantitative evidence to the development of prevention strategies and intervention programs is emphasized and highlighted via real-world examples. □ <u>Assessment Opportunity:</u> Week 1. A problem set assignment (problem set for week 1) requires students to demonstrate their understanding of the role of quantitative methods and epidemiologic thinking in assessing population health. For example, a question in this problem set encourages students to think how an epidemiologic study of a condition often begins by trying to identify all cases that occur in a defined population at risk and asks them to identify the corresponding defined population at risk for epidemiologic purposes for cases of certain diseases. These questions are assessed individually. □ EPI 583: qualitative <u>Didactic Opportunity:</u> Week 2. Lecture on qualitative methods research and its application entitled "Bullying and Quality of life in youths perceived as gay, lesbian, or bisexual in Washington State;" Watch the online Yale Global Health Leadership Institute's lecture series on "Fundamentals of Qualitative Research Methods" Module 1 (What is qualitative research?), Module 2 (Developing a qualitative research question), Module 5 (Data analysis), and Module 6 (Scientific rigor). □ <u>Assessment Opportunity:</u> Week 2. In an individual homework assignment, students prepare an essay response discussing the need for qualitative data collection methods, how these data provide value beyond what might have been possible in the context of quantitative data collection. They also describe one complexity of qualitative vs. quantitative data collection; After watching the Yale Global Health Leadership Institute's lecture series on qualitative research methods, students complete a quiz

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	EPI 512: Epidemiologic Methods I	<p><u>Didactic Opportunity</u>: Week 3. A lecture titled "Study Design [1]" and a textbook chapter reading cover the concept of "Person, Place, and Time." During the lecture, the students learn about the leading causes of mortality and morbidity in the US using several sources of information such the Global Burden of Disease, National Center for Health Statistics, published articles, and media (e.g., How American Die? https://www.bloomberg.com/graphics/dataview/how-americans-die). □</p> <p><u>Assessment Opportunity</u>: Week 3. A discussion question assignment (discussion question for week 3) requires students to individually think how cancer has been changing as a leading cause of death in the US and explain the concepts of mortality rate and proportional mortality in relation to that disease. Students then discuss their answer within small group sessions led by faculty and teaching assistants. During the lecture, PollEverywhere is used to assess students' knowledge on the leading causes of morbidity and mortality in the U.S.</p>
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	EPI 583: Epidemiology Seminar	<p><u>Didactic Opportunity</u>: Week 4. Lecture on "Cohort studies of the efficacy of screening for cancer," reading "Applying epidemiologic concepts of primary, secondary, and tertiary prevention to the elimination of racial disparities in asthma" by Joseph et al. 2006.</p> <p><u>Assessment Opportunity</u>: Week 4. In an individual homework assignment, students prepare an essay response discussing the difference between primary, secondary, and tertiary prevention using cancer as an example. They also discuss the role of disease screening and surveillance, including costs of false positive and false negative screening tests. Students complete a quiz based on the Joseph et al. 2006 article.</p>
6. Explain the critical importance of evidence in advancing public health knowledge	EPI 583: Epidemiology Seminar	<p><u>Didactic Opportunity</u>: Week 10. Lecture on "Landmarks in public health history and their continued significance."</p> <p><u>Assessment Opportunity</u>: Week 10. In an individual homework assignment, students explain the critical importance of vaccines, and, the role of vaccine hesitancy as factors that influence current vaccination policies and the need for disease surveillance.</p>
7. Explain effects of environmental factors on a population's health	EPI 583: Epidemiology Seminar	<p><u>Didactic Opportunity</u>: Week 5. Lecture on "Addressing environmental determinants of child health, in your backyard and in our nation;" readings: Cardiovascular Disease: An Update to the Scientific Statement From the American Heart Association; and The Toll of Coal: Health Impacts of Coal Export in the Northwest. □</p> <p><u>Assessment Opportunity</u>: Week 5. In an individual homework assignment, students prepare an essay response explaining why children are especially vulnerable to the health effects of air pollution exposure, including at least one relevant example as to a likely contributor to air pollution in their community. Students discuss how one might use biological and epidemiologic evidence to enact change in public health policies surrounding this contributor to air pollution.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 6. Lecture on "Whose genomes matter." Reading: "Genetics in public health: rarely explored" by Aswini and Varun 2010. <u>Assessment Opportunity</u> : Week 6. In an individual homework assignment, students explain ways in which integrating genetics into public health departments can help these agencies to better provide the 10 essential services with regard to biological risk factors and outcomes. Students prepare an essay explaining implications of excluding minority populations from population genetics research.
9. Explain behavioral and psychological factors that affect a population's health	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 7. Lecture on "Associations between depression and marijuana use and misuse during adolescence." <u>Assessment Opportunity</u> : Week 7. In an individual homework assignment, students explain the connection between mental health and drug abuse disorders using the relationship between marijuana use patterns and depression as an example.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 8. Lecture on "From payday loans to pawnshops: fringe banking, the unbanked, and health;" Reading: Psychiatric, psychological, and social determinants of health in the Nurses' Health Study cohorts. Trudel-Fitzgerald et al. 2016. <u>Assessment Opportunity</u> : Week 8. In an individual homework assignment, students explain (and provide specific examples) the implications of the growth of the fringe banking industry on social welfare programs and health outcomes. Students explain how two different factors (among social, political, economic, or behavioral) contribute to, or are related to, individual mental health outcomes, such as depression.
11. Explain how globalization affects global burdens of disease	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 3. Lecture on "Global burden of disease, injuries, risk factors, current status and potential changes in the face of globalization;" Reading: "The health impacts of globalisation: a conceptual framework" by Huynen et al. 2005. <u>Assessment Opportunity</u> : Week 3. In an individual homework assignment, students explain how patterns of globalization may influence the relevance of health risk factors to individual and population health.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 9. Lecture on "One Health integrated surveillance of antimicrobial resistance in humans, animals, and environments" and watch an online lecture by Peter Rabinowitz entitled, "The One Health approach to public health challenges in the Pacific Northwest." <u>Assessment Opportunity</u> : Week 9. In an individual homework assignment, students explain how animals might serve as sentinels of environmental health hazard, and provide an example of a microbe that is "shared" between animals and humans.

Content Coverage for Academic Public Health Master's Degree		Health Services, General: Masters in Science Health Services, Clinical and Translational Research: Masters in Science
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 1. Raymond L. Goldsteen, Karen Goldsteen and Terry L. Dwelle. Introduction to public health: promises and practices. 2015. Chapters 1 and 2. □ <u>Assessment Opportunity</u> : Week 1. Class exercise asking students to choose from one of four issues in our society (such as homelessness, etc) and explain why that issue is a public health issue. Students work in groups but respond individually to random calling.
2. Identify the core functions of public health and the 10 Essential Services*	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 1. Raymond L. Goldsteen, Karen Goldsteen and Terry L. Dwelle. Introduction to public health: promises and practices. 2015. Chapter 3. □ <u>Assessment Opportunity</u> : Week 1. Class exercise asking students to describe what they think can be done to address a specific public health issue. They are asked to use the 3 core functions and 10 essential services framework, as well as the Public Health 3.0 key components, to structure the discussion and inform their answer.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	EPI 512: Epidemiologic Methods I □ HSERV 592: Program Seminars (Health Research Training)	EPI 512: quantitative <u>Didactic Opportunity</u> : Week 1. A lecture and a textbook chapter reading cover the concept of "Diseases and Populations," and quantitative thinking in population health sciences. The critical importance of quantitative approaches to generate evidence, describe the burden of a health problem, and identify its determinants at the population level are discussed. In addition, the contribution of quantitative evidence to the development of prevention strategies and intervention programs is emphasized and highlighted via real-world examples. <u>Assessment Opportunity</u> : Week 1. A problem set assignment (problem set for week 1) requires students to demonstrate their understanding of the role of quantitative methods and epidemiologic thinking in assessing population health. For example, a question in this problem set encourages students to think how an epidemiologic study of a condition often begins by trying to identify all cases that occur in a defined population at risk and asks them to identify the corresponding defined population at risk for epidemiologic purposes for cases of certain diseases. These questions are assessed individually. HSERV 592: qualitative <u>Didactic Opportunity</u> : Lecture in week 4. An Overview of qualitative, quantitative, and mixed methods approaches. <u>Assessment Opportunity</u> : Students will be assigned to participate in a discussion on Canvas during week 4 in which they: 1. talk about a journal article they read in their research area recently which used a quantitative or qualitative approach, and what they believe could have been gained if the authors had conducted a mixed methods project in which they integrated use of the other (qualitative or quantitative) approach, and 2. show insight and critical thinking in their response to each other's posts.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	EPI 512: Epidemiologic Methods I	<p><u>Didactic Opportunity</u>: Week 3. A lecture titled "Study Design [1]" and a textbook chapter reading cover the concept of "Person, Place, and Time." During the lecture, the students learn about the leading causes of mortality and morbidity in the US using several sources of information such the Global Burden of Disease, National Center for Health Statistics, published articles, and media (e.g., How American Die? https://www.bloomberg.com/graphics/dataview/how-americans-die). □</p> <p><u>Assessment Opportunity</u>: Week 3. A discussion question assignment (discussion question for week 3) requires students to individually think how cancer has been changing as a leading cause of death in the U.S. and explain the concepts of mortality rate and proportional mortality in relation to that disease. The students then discuss their answer within small group sessions led by faculty and teaching assistants. During the lecture, PollEverywhere is used to assess students' knowledge on the leading causes of morbidity and mortality in the U.S.</p>
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSERV 511: Introduction to Health Services and Public Health	<p><u>Didactic Opportunity</u>: Week 9. Thomas S. Bodenheimer and Kevin Grumbach. Understanding Health Policy: a Clinical Approach, 7th ed. New York: McGraw Hill, 2016. Chapter 11, Prevention of Illness.</p> <p><u>Assessment Opportunity</u>: Week 9. Write a reflection paper where you choose a health condition and describe an example of what primary, secondary, and tertiary prevention could look like for that condition, including why each are different but equally important.</p>
6. Explain the critical importance of evidence in advancing public health knowledge	HSERV 511: Introduction to Health Services and Public Health	<p><u>Didactic Opportunity</u>: Week 7. Brownson, R. C., Fielding, J. E., & Maylahn, C. M. (2009). Evidence-based public health: a fundamental concept for public health practice. Annual review of public health, 30, 175-201. □</p> <p><u>Assessment Opportunity</u>: Week 7. Class exercise: students work in groups to address a particular public health issue in our state using evidence-based interventions from repositories such as the Community Guide. Individual contributions assessed as part of the participation grade.</p>
7. Explain effects of environmental factors on a population's health	HSERV 592: Program Seminars (Health Research Training)	<p><u>Didactic Opportunity</u>: Lecture in week 3. Focusing on building, annotating, explaining, and using a conceptual model to explain how health outcome are affected by environmental, biological, genetic, behavioral, and psychological factors. Demonstration of PowerPoint and LucidChart to create models.</p> <p><u>Assessment Opportunity</u>: Students will be assigned to participate in a discussion on Canvas during week 3 in which they: 1. create and upload a draft conceptual model of their area of interest (whether sketched or created in Power Point or LucidChart), and how their health outcome is affected by environmental, biological, genetic, behavioral, and psychological factors; and 2. show insight and critical thinking in their response to each other's posts.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	HSERV 592: Program Seminars (Health Research Training)	<u>Didactic Opportunity</u> : Lecture in week 3. Focusing on building, annotating, explaining, and using a conceptual model to explain how health outcomes are affected by environmental, biological, genetic, behavioral, and psychological factors. Demonstration of PowerPoint and LucidChart to create models. <u>Assessment Opportunity</u> : Students will be assigned to participate in a discussion on Canvas during week 3 in which they: 1. create and upload a draft conceptual model of their area of interest (whether sketched or created in Power Point or LucidChart), and how their health outcome is affected by environmental, biological, genetic, behavioral, and psychological factors, and 2. show insight and critical thinking in their response to each other's posts.
9. Explain behavioral and psychological factors that affect a population's health	HSERV 592: Program Seminars (Health Research Training)	<u>Didactic Opportunity</u> : Lecture in week 3. Focusing on building, annotating, explaining, and using a conceptual model to explain how health outcome are affected by environmental, biological, genetic, behavioral, and psychological factors. Demonstration of PowerPoint and LucidChart to create models. <u>Assessment Opportunity</u> : Students will be assigned to participate in a discussion on Canvas during week 3 in which they: 1. create and upload a draft conceptual model of their area of interest (whether sketched or created in Power Point or LucidChart), and how their health outcome is affected by environmental, biological, genetic, behavioral, and psychological factors, and 2. show insight and critical thinking in their response to each other's posts.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 2. Bezruchka, S. (2019). Epidemiological Approaches to Population Health. In "Staying alive: critical perspectives on health, illness, and health care." T. Bryant, D. Raphael and M. H. Rioux. Toronto, CSPI: 4-37. <u>Assessment Opportunity</u> : Week 3. Students complete an individual assignment in which they need to do the following: 1. take a health equity quiz; 2. make international mortality data comparisons; 3. do an U.S. excess child death calculation; 4. explore U.S. county-level life expectancy rates, and 5. explore how Canada presents information about key determinants of health. They then submit a written report of their findings in which they reflect on 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	HSERV 592: Program Seminars (Health Research Training)	<u>Didactic Opportunity</u> : Students are required to read Huynen MMTE, Martens P, Hilderink HBM. The health impacts of globalization: a conceptual framework. Globalization and Health, 2005. <u>Assessment Opportunity</u> : Students are required to write a reflection statement in which they discuss the factors of globalization that serve as determinants of health, and the potential mechanisms by which globalization may be impacting the spread of COVID-19.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HSERV 592: Program Seminars (Health Research Training)	<p><u>Didactic Opportunity</u>: Students are required to watch the following webinar: The One Health Approach to Public Health Challenges in the Pacific Northwest. https://www.nwcphp.org/training/opportunities/webinars/one-health-approach-to-public-health-challenges; direct link to recording: http://www.nwcphp.org/docs/ht2015/20150714/htip20150714.html.</p> <p><u>Assessment Opportunity</u>: Students are required to write a reflection statement in which they discuss how One Health is informing public health efforts and influencing public health in Washington state, and what implications One Health approaches may have in preventing and managing pandemic outbreaks such as that with COVID-19.</p>

Content Coverage for Academic Public Health Master's Degree		Nutritional Sciences: Masters in Science
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity</u>: Week 1. Students complete reading on the history and future of public health.</p> <p><u>Assessment Opportunity</u>: Week 1. Students complete in-class question sets to assess their understanding of public health history and public health frameworks for approaching health burdens.</p>
2. Identify the core functions of public health and the 10 Essential Services*	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity</u>: Week 1. Readings for this week include coverage of the 10 essential services and core functions of public health.</p> <p><u>Assessment Opportunity</u>: Week 1. Students complete in-class question sets to reflect on the 10 essential services, including a question about the 10 essential services.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	<p>BIOST 511: Medical Biometry I</p> <p>NUTR 531: Public Health Nutrition</p>	<p>BIOST 511: quantitative <u>Didactic Opportunity</u>: Course textbook: Baldi, B and Moore DS (2013), The Practice of Statistics in the Life Sciences. <u>Assessment Opportunity</u>: Explanation of quantitative methods to be used to describe and assess a population's health are part of the data analysis plan Part 1 submitted by each student for their Data Analysis Project.</p> <p>NUTR 531: qualitative <u>Didactic Opportunity</u>: Week 1-2. Lab presentation to discuss how to conduct pragmatic qualitative research. Students review interview guides created by course instructors. Week 1-10. Lab Project. Students will observe practices, interview stakeholders, analyze interviews, and assess changes implementation in a community-based policy development project. <u>Assessment Opportunity</u>: Week 10. The Lab Project. Students develop an individually assessed annotated bibliography related to the lab project topic. They also develop and submit an executive summary and a report for the community-based clients and other stakeholders. Additionally, they prepare and conduct a presentation for the client and other stakeholders. Student assessment includes the appropriate use and interpretation of the qualitative data collected. Each student has an individual role assignment in the group project and receives an individual and a group grade.</p>
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity</u>: Week 1. Students prepare for in-class discussion by reading the following article: Murray CJL, Phil D, Lopez AD. Measuring the global burden of disease. NEJM 2013;369(5):448-457. <u>Assessment Opportunity</u>: Week 1. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: "List what you consider to be the top 6-10 chronic conditions that contribute to mortality. For each condition, list the most frequent associated morbidities (at least two per condition). Discuss contributors to the occurrence of morbidity, or chronic disease, in an individual and a population. Develop a comprehensive, yet succinct, one sentence definition of chronic disease."</p>
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity</u>: Week 1. Students prepare for in-class discussion by reading the following article: Starfield B, Hyde J, Gervas J, Heath I. The concept of prevention: A good idea gone astray? J Epid Comm Health 2008; 62: 580-583. <u>Assessment Opportunity</u>: Week 1. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: Discuss the science of primary, secondary, and tertiary prevention of disease in population health. Based on the Starfield article, define the different levels of prevention. Reflect on the ways in which the Starfield article changed or expanded your understanding and/or ways of thinking about disease prevention and health promotion.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
6. Explain the critical importance of evidence in advancing public health knowledge	NUTR 531: Public Health Nutrition	<u>Didactic Opportunity</u> : Week 4. Lecture on evaluating the scientific evidence. <u>Assessment Opportunity</u> : Week 1, 2. Students complete critical article review questions. Week 10. Students write a paper about the scientific evidence around a public health nutrition issue that includes a critical evaluation of the scientific literature.
7. Explain effects of environmental factors on a population's health	NUTR 531: Public Health Nutrition	<u>Didactic Opportunity</u> : Week 2. Students read two articles to prepare for discussion of how environmental features, such as the built environment, including the food environment, as well as neighborhood environments (including deprivation and segregation) may influence health outcomes. Luckerson, Victor. How a City Fought Runaway Capitalism and Won: New York Times. Nov 15 2019. https://www.nytimes.com/2019/11/15/opinion/sunday/tulsa-dollar-stores.html . Richardson, Andrea S., et al. "Can the introduction of a full-service supermarket in a food desert improve residents' economic status and health?" Annals of Epidemiology 27.12 (2017): 771-776. <u>Assessment Opportunity</u> : Week 2. The New York Times article is used as a launching point for an in-class discussion of how our food environment and neighborhood environment can influence health. Students then complete and submit an in-class question set on the Annals of Epidemiology paper, including the questions below which specifically ask students to explain the effects of the main exposure and other factors (environmental factors, including but not limited to the food environment) on population health. Subset of questions from question set: 3. What is the main outcome of interest? 4. How is the outcome measured? 5. What is the main exposure of interest? 6. What other factors did the authors control for in the analyses? What does this mean in your own words?
8. Explain biological and genetic factors that affect a population's health	NUTR 562: Nutrition and Chronic Disease	<u>Didactic Opportunity</u> : Weeks 2-10. Students prepare for each in-class discussion by reading articles and textbook chapters that include the biological, pathophysiological, psychological, behavioral, metabolic, and genetic factors that relate to specific chronic diseases and health in the population. For example, students prepare for a week 6 in-class discussion on diabetes by reading: Zaccardi F, Webb DR, Yates T, Davies MJ. Patho-physiology of type 1 and type 2 diabetes mellitus. A 90-year perspective. Postgrad Med J 2016. <u>Assessment Opportunity</u> : Clinical Fact Sheets due Week 5 (set 1) and Week 10 (set 2). Students collaborate in pairs, but individually prepare and submit an evidence-based clinical fact sheet for an assigned chronic disease. Each clinical fact sheet contains the following information about the disease state assigned: classification and/or definition; assessment/screening tools and concerns; diagnostic criteria and procedures; treatment modalities (medical nutrition therapy; pharmacological management); genetic underpinnings to consider (e.g., autoimmune disease, specific common mutations); clinical and or educational goals; complications and common comorbidities; anything else that might be helpful (e.g., relevant calculations); references.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
9. Explain behavioral and psychological factors that affect a population's health	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Weeks 2-10. Students prepare for each in-class discussion by reading articles and textbook chapters that include the biological, pathophysiological, psychological, behavioral, metabolic, and genetic factors that relate to specific chronic diseases and health in the population. For example, students prepare for a week 4 in-class discussion on obesity as a disease by reading: Upadhyay J, et al. Obesity as a disease. Med Clin N Am 2018; 102: 13-33.</p> <p><u>Assessment Opportunity:</u> Week 4. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: what are some of the behavioral and psychological factors associated with classifying obesity as a disease?</p>
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity:</u> Week 2. Students read two papers on social, political, and economic determinants of health.</p> <p><u>Assessment Opportunity:</u> Week 2. Students discuss one of the two papers in-depth in a group. Students prepare and deliver a presentation of one paper to the rest of the class and answer questions from classmates. Students are assessed individually for the contribution to the group discussion and presentation explaining the social, political, and economic determinants of health and how they contribute to population health and health inequities.</p>
11. Explain how globalization affects global burdens of disease	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Week 1. Students prepare for in-class discussion by reading: Murray CJL, Phil D, Lopez AD. Measuring the global burden of disease. NEJM 2013; 369(5): 448-457 (https://www.nejm.org/doi/pdf/10.1056/NEJMr1201534).</p> <p><u>Assessment Opportunity:</u> Week 1. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: what are the positive and negative effects of globalization with respect to chronic disease? Discuss whether the three global drivers of transitions in global health identified in the assigned paper apply to changes in the U.S.</p>
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	<p><u>Didactic Opportunity:</u> Weeks 1-10. In order to introduce and assess the ecological perspective on the connections among human health, animal health, and ecosystem health; students read books and readings weeks 1-10 in preparation for class.</p> <p><u>Assessment Opportunity:</u> Weeks 2-10. Every student has the opportunity to facilitate discussions in teams, and submit pre- and post-discussion reflections analyzing key intersections among human, animal, and ecosystem health influencing food systems components and determinants in the U.S. Instructor assesses each team facilitation and provides feedback to individual students based on a moderation assessment rubric that is given to students at the outset of the class. Instructor assesses each individual's pre- and post-reflections and provides feedback to individual students based on a reflection assessment rubric that is given to students at the outset of the class.</p>

Content Coverage for Academic Public Health Master's Degree		Genetic Epidemiology: Masters in Science
Content	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Explain public health history, philosophy and values	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture drawn from CDC material. <u>Assessment Opportunity</u> : Week 10. Students write a term paper, synthesizing how public health foundations relate to a chosen health condition (a major cause of morbidity/mortality) and how an understanding of the foundations of public health will impact the student's work as a biostatistician.
2. Identify the core functions of public health and the 10 Essential Services*	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture on core functions, week 3. Lecture and video on 10 essential services. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material which introduces and applies the core functions of public health and the 10 Essential Services. (Pre-Quiz 2 Q1-6, Post-Quiz 2 Q1-2)
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Video and article on quantitative vs qualitative methods and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the role of quantitative and qualitative studies. (Pre-Quiz 3 Q1-5, Post-Quiz 3 Q1-3)
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 2. Video and readings on causes of mortality and lecture. <u>Assessment Opportunity</u> : Week 2. Students complete two quizzes with questions relating to assigned material on major causes and trends of morbidity and mortality in the US and China. (Pre-Quiz 1, Post-Quiz 1)
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 3. Lecture on primary, secondary, and tertiary prevention in population health. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material on primary, secondary, and tertiary prevention. (Pre-Quiz 2 Q7-10, Post-Quiz 2 Q3-5)
6. Explain the critical importance of evidence in advancing public health knowledge	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Article on the importance of evidence and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the importance of evidence in advancing public health knowledge. (Pre-Quiz 3 Q6-10, Post-Quiz 3 Q4-5)
7. Explain effects of environmental factors on a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Videos and reading on air pollution and on environmental influences on health and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on effects of environmental factors on a population's health. (re-Quiz 4 Q1-5, Post-Quiz 4 Q1-2)

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Video on genetic and environmental influences on health, readings on biological and genetic factors and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on biological and genetic factors that affect a population's health. (Pre-Quiz 4 Q6-10, Post-Quiz 4 Q3-5)
9. Explain behavioral and psychological factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Videos on physical activity and cardiovascular health. and social determinants of health; lecture and discussion. <u>Assessment Opportunity</u> : Week 8. Students complete two quizzes with questions relating to assigned material on behavioral and psychological factors that affect a population's health. (Pre-Quiz 6 Q1-5, Post-Quiz 6 Q1-2)
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Readings on health and income inequality and discussion. <u>Assessment Opportunity</u> : Week 6. Students complete two quizzes with questions relating to assigned material on social, political, and economic determinants of health, and how they contribute to population health and health inequities. (Pre-Quiz 6 Q6-10, Post-Quiz 6 Q3-5)
11. Explain how globalization affects global burdens of disease	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Reading on globalization and health and lecture. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on how globalization affects global burdens of disease. (Pre-Quiz 7 Q1-5, Post-Quiz 7 Q1-2)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Readings on One Health and planetary health. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on the connections among human health, animal health, and ecosystem health. (Pre-Quiz 7 Q6-10, Post-Quiz 7 Q3-5)

- 3) Provide a matrix, in the format of Template D17-2, that lists competencies for each relevant degree and concentration. The matrix indicates at least one assessment activity for each of the listed competencies. Typically, the school will present a separate matrix for each concentration. Note: these competencies are defined by the school and are distinct from the foundational public health learning objectives defined in this criterion.

Assessment of Competencies for Academic Master's Degree		
Biostatistics: Masters in Science		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Analyze data from a case-control study using logistic regression, interpret and make inference on model parameters.	BIOST 536: Categorical Data Analysis in Epidemiology	<u>Didactic Opportunity</u> : Lecture 4. Logistic regression model parameterizations. Lecture 6. Adjusting for Confounders. Lecture 9. Effect Modification. Lecture 11. Conditional Logistic Regression. <u>Assessment Opportunity</u> : Homework 2 (due week 3). Analyze data from a case-control study of lung cancer examining two exposures, smoking and asbestos. Homework 3 (due week 4): analyze data from a case-control study of esophageal cancer examining an alcohol exposure and adjusting for age. Homework 6 (due week 7): Interpret regression results from regression analysis of a matched case-control study.
2. Determine the power/sample size for a study.	BIOST 514: Biostatistics I	<u>Didactic Opportunity</u> : Lecture 21. "Power of a Statistical Test: Power and Sample Size Calculations." <u>Assessment Opportunity</u> : Final, question 6. Determine the minimum required sample size to detect a clinically-important effect size, with a specific power and level, for a standard two-groups design.
3. Communicate the results of a regression analysis of continuous, binary, and time to event outcomes to an audience of non-statisticians, including an interpretation of parameter estimates.	BIOST 515: Biostatistics II	<u>Didactic Opportunity</u> : Lectures 11 and 12 ("Logistic Regression 1" and "Logistic Regression 2"): logistic regression (a model for binary data). These lectures also introduce interpretation of the parameter estimates. <u>Assessment Opportunity</u> : Given a description of data collected and the output of a logistic regression from R, students explain logistic regression to scientific collaborators, and interpret the estimated coefficient of the primary outcome of interest (planned 2021 final).

Assessment of Competencies for Academic Master's Degree		Biostatistics, Capstone: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity"
1. Develop a Statistical Analysis Plan to address a research problem presented by a project sponsor.	BIOST 596: Biostatistics Capstone I, Project Planning	<u>Didactic Opportunity</u> : Week 3. Lecture, "How to Develop a Statistical Analysis Plan." <u>Assessment Opportunity</u> : Week 6. Presentation of Statistical Analysis Plans. Students work in small groups on a culminating applied project, in collaboration with an outside sponsor. After working with the sponsor to identify a project topic, the team of students formulate a detailed formal Statistical Analysis Plan, including a description of data that will be collected, how it will be analyzed, and how the results will be presented to the sponsor. As part of the documentation of this assignment, each student will indicate at least one unique specific contribution that they made to the Statistical Analysis Plan. In addition to providing an assessment of the assignment as a whole, the instructor will provide an assessment of each individual student's unique contribution.
2. Develop a Project Management Plan for an applied statistics research project.	BIOST 596: Biostatistics Capstone I, Project Planning	<u>Didactic Opportunity</u> : Week 7. Lecture, "How to Develop and Prepare a Project Management Plan." □ <u>Assessment Opportunity</u> : Week 9. Presentation of Project Management Plan. Students work in their small groups to develop a formal Project Management Plan that will guide their work through completion of the project. The Project Management Plan includes roles of team members, milestones, timeline, deliverables, and contingency plans. As part of the documentation of the assignment, each student will indicate their unique specific contributions to the Project Management Plan. In addition to providing an assessment of the Project Management Plan as a whole, the instructor will provide an assessment of each individual student's unique contribution.
3. Collaborate effectively as a member of a team of applied statisticians in solving a real-world problem.	BIOST 597: Biostatistics Capstone II, Project Implementation	<u>Didactic Opportunity</u> : Week 1. Lecture on "Effective research as a member of a collaborative team." Week 3. Lecture on "Effective presentations in a collaborative environment." <u>Assessment Opportunity</u> : Week 10. Students turn in their individual Capstone Portfolios, which will be evaluated by the course instructor. The Capstone Portfolio will include examples of statistical analysis products, computer code, and oral and written presentation materials developed by the student as part of their Capstone Project. Students complete their Capstone Project by implementing the project plans developed as part of BIOST 596. To complete the project, students collaborate closely with the members of their small group, as well as the external sponsor, and produce a final report and other deliverables to be shared with the sponsor. As part of the documentation of their Portfolio, each student indicate their unique specific contributions to the execution of the project that demonstrate how they exercised their collaborative skills. As part of the evaluation of the student's Portfolio, the instructor will evaluate the degree to which the student effectively collaborated with other team members in order to produce work that complemented the contributions of other team members and the external sponsor.

Assessment of Competencies for Academic Master's Degree		Environmental Health: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Describe the sources, pathways, and routes of exposure of microbial and chemical hazards in the environment.	ENV H 541: Ecology of Environmentally Transmitted Microbial Hazards	<u>Didactic Opportunity</u> : Week 1. Lecture on principals of infectious disease epidemiology. Week 7. Lecture on waterborne pathogens. Week 8. Lecture on air pathway. Week 9. Lecture on surfaces and food. <u>Assessment Opportunity</u> : Week 11. Final: Students respond to matching, short answer, and true/false questions related to sources, pathways, and routes of exposure for environmental hazards.
2. Apply measurement and/or modeling methods to microbial and chemical hazards.	ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	<u>Didactic Opportunity</u> : Week 4. Lecture on exposure assessment for epidemiology studies. Week 5, Lecture on exposure to biological agents. Week 7. Lecture on probabilistic and Monte Carlo models. <u>Assessment Opportunity</u> : Midterm (week 5) and final (week 10). Short answer questions related to applying measurement and or modeling methods to microbial and chemical hazards.
3. Recognize and explain personal, administrative/regulatory, and engineering controls for environmental hazards.	ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	<u>Didactic Opportunity</u> : Week 1. Lecture on exposure science drivers: regulatory mandates and risk assessment. Week 10. Lecture on risk assessment/risk management. <u>Assessment Opportunity</u> : Midterm (week 5) and final (week 10). Short answer questions related to administrative/regulatory/engineering controls for environmental hazards.

Assessment of Competencies for Academic Master's Degree		Environmental and Occupational Health, Exposure Sciences: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Identify and characterize hazardous environmental exposures.	ENV H 553: Environmental Exposure Monitoring Methods	<u>Didactic Opportunity</u> : Through background readings, lectures, and lecture handouts students learn to characterize and quantify exposures to hazardous particles, gases, vapors, and chemical contaminants in air, soil, and water. Example: particle measurement methods, lectures 14-18. <u>Assessment Opportunity</u> : Students perform a variety of calculations related to quantifying hazardous exposures in air, water, soil, and on surfaces. Example for particle measurement methods: Problem sets 2-4, midterm quizzes 1 and 2, final.
2. Describe the use and limitations of accepted sampling and analysis methods for chemical hazards and quality control measures for environmental exposure assessments.	ENV H 553: Environmental Exposure Monitoring Methods	<u>Didactic Opportunity</u> : Lecture 27, Data Quality. Through background readings, lectures, and lecture handouts students learn the applications, strengths, and limitations of standard methods for analysis of chemical hazards. <u>Assessment Opportunity</u> : Weeks 8-10. Final: Students perform a variety of calculations related to quality control of sampling and analysis procedures for exposure assessment.
3. Demonstrate skills in characterizing exposure to hazardous aerosols.	ENV H 553: Environmental Exposure Monitoring Methods	<u>Didactic Opportunity</u> : Week 6. Lectures 14-18. Particle sampling and analysis. Through background readings, lectures, and lecture handouts students learn the applications, strengths, and limitations of standard methods for sampling and analysis of aerosols. <u>Assessment Opportunity</u> : Week 6. Problem set 3: Students perform a variety of calculations related to sampling of total dust and size-selected fractions of aerosols.

Assessment of Competencies for Academic Master's Degree		Environmental and Occupational Health, Occupational Hygiene: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Propose comprehensive solutions to control health hazards associated with workplace exposures.	ENV H 550: Occupational and Environmental Disease	<p><u>Didactic Opportunity</u>: Weeks 1-9. Students view recorded mini-lectures, read peer-reviewed publications, and review other multi-media resources on exposures/hazards associated with occupational diseases.</p> <p><u>Assessment Opportunity</u>: Students work together to identify, characterize, and propose solutions to scenarios in which exposures/hazards and associated diseases are present in workplace settings, submit individual weekly reflections (weeks 1-9), and participate in student-led interactive presentations of peer-reviewed publications that evaluate the relationship between exposure and disease, and that evaluate methods for classifying occupational diseases (e.g., carpal tunnel syndrome) (week 4). Presentations and weekly reflections are individually graded.</p>
2. Demonstrate the use and limitations of accepted sampling and analysis methods for chemical, physical, and microbiological workplace hazards, and use of quality control measures for exposure assessments in the workplace.	ENV H 553: Environmental Exposure Monitoring Methods	<p><u>Didactic Opportunity</u>: Through background readings, lectures, and lecture handouts students learn the applications, strengths and limitations of standard methods for analysis of chemical hazards. Examples: Lecture 19, 20: gas sampling methods.</p> <p><u>Assessment Opportunity</u>: Example: problem set 5. Students propose and justify a sampling and analysis method for measurement of PCBs in human serum.</p>
3. Explain the effects on the human body of inorganic dusts, musculoskeletal hazards, and chemicals, including solvents, metals (including lead), and noise from an occupational health perspective.	ENV H 550: Occupational and Environmental Disease	<p><u>Didactic Opportunity</u>: Weeks 3. Students view recorded mini-lectures, read peer-reviewed publications, and review other multi-media resources, including reading Deyo 2002, NIOSH MSK & workplace factors 1997 Report, Executive Summary (x-xii) and Ch. 6: http://www.cdc.gov/niosh/docs/97-141/pdfs/97-141.pdf, regarding low back musculoskeletal disorders associated with warehouse work.</p> <p><u>Assessment Opportunity</u>: Week 3. Students participate in student-led interactive presentations of what they read, and write a reflection explaining the topic (effects on the human body of musculoskeletal hazards from an occupational health perspective). Presentations and weekly reflections are individually graded.</p>

Assessment of Competencies for Academic Master's Degree		Environmental and Occupational Health, Applied Occupational Hygiene: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Identify and characterize health hazards associated with exposures in the workplace.	ENV H 564: Recognition of Health and Safety Problems in Industry	<p><u>Didactic Opportunity</u>: Week 5. Students read from a chapter on machine guarding and attend a lecture on using ventilation for chemical and dust exposure controls.</p> <p><u>Assessment Opportunity</u>: Weeks 8 and 10. In week 8, students tour a lead-acid battery manufacturer to observe a variety of controlled and uncontrolled hazards. Utilizing the knowledge gained previously, they write a report identifying and characterizing a number of hazards and exposure controls observed at that site.</p>
2. Demonstrate the application of accepted sampling and analysis methods to the assessment of exposures to chemical, physical, and microbiological hazards in the workplace.	ENV H 555: Instrumental Methods for Industrial Hygiene Measurement, Laboratory Class	<p><u>Didactic Opportunity</u>: Lab guides for 8 distinct exposure assessment/chemical characterization experiments, accompanied by in-class mini lectures for each of the experiments. Example: Module 3: Airborne Particle Characterization.</p> <p><u>Assessment Opportunity</u>: Students prepare and submit eight lab reports that involve collecting, processing, and interpreting exposure data in a simulated workplace. Example: Module 3: The lab report for airborne particle characterization specifically asks to, "Discuss the advantages and disadvantages of each of the [aerosol sampling] techniques. In what circumstances would each technique be most appropriate? What situations would require the use of multiple sampling techniques vs. one particular technique?"</p>
3. Apply industrial hygiene technical knowledge and training in a workplace environment.	ENV H 598: Degree Program/Project Portfolio ENV H 599C: Field Studies (Internship)	<p><u>Didactic Opportunity</u>: Week 1. Prior to the start of their internship, student meet with the academic advisor and the site supervisor to specify content for the internship experience and ensure it meets course expectations.</p> <p><u>Assessment Opportunity</u>: ENV H 598. Students complete an occupational hygiene related internship in a occupational setting and provide a final report summarizing their internship activities and demonstrating application of industrial hygiene knowledge.</p>

Assessment of Competencies for Academic Master's Degree		
Environmental Toxicology: Masters in Science		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Define the major classes of toxicants present in the environment and the workplace, and describe their sources, pathways, and routes of exposure.	ENV H 514: Fundamentals of Toxicology ENV H 515: Organ Systems Toxicology ENV H 516: Toxic Agents: Effects and Mechanisms ENV H 591: Current Topics in Toxicology ENV H 593: Current Topics in Risk Assessment	ENV H 516 <u>Didactic Opportunity</u> : Week 4. Lecture on the definition and classification of pesticides (insecticides, herbicides, fungicides, rodenticides); their manufacture and the occupational and environmental distribution and exposure pathways involved. <u>Assessment Opportunity</u> : Week 6. Midterm question: What is the principle molecular mechanism of acute toxicity caused by organophosphate insecticides?
2. Describe and analyze how toxicants interact with biological systems and the mechanisms by which they elicit adverse effects in humans and other organisms.	ENV H 514: Fundamentals of Toxicology ENV H 515: Organ Systems Toxicology ENV H 516: Toxic Agents: Effects and Mechanisms ENV H 591: Current Topics in Toxicology ENV H 593: Current Topics in Risk Assessment	ENV H 514 <u>Didactic Opportunity</u> : Week 4. Description of the metabolism of acetaminophen; analysis of dose response relationships and how high dose overwhelms detoxification mechanisms leading to liver failure; analysis of glutathione levels and provision of n-acetylcysteine can prevent liver failure after acetaminophen overdose. <u>Assessment Opportunity</u> : Week 4. Poll Everywhere: what are the principle means by which acetaminophen overdose causes liver damage; what is the lobular distribution of this injury, and what biotransformation enzyme activity largely explains this lobular injury; how does alcohol consumption modify this injury?
3. Explain the core principles of research ethics and apply these principles to specific research projects.	ENV H 583: Thesis Research Proposal Preparation	<u>Didactic Opportunity</u> : Week 5. Students complete readings related to research ethics. Example: the connection between reporting of research results and any financial conflicts of interest. <u>Assessment Opportunity</u> : week 5. Students submit a written reflection (short report) on the reasons for this concern, and the necessity for full disclosure of potential or actual financial COI in peer-reviewed journal articles.

Assessment of Competencies for Academic Master's Degree		Environmental and Occupational Health, Applied Toxicology: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Apply toxicology principles and methods in planning work in a professional setting (public or private sector).	ENV H 598: Degree Program/Project Portfolio ENV H 599: Field Studies (Internship)	ENVH 599 <u>Didactic Opportunity</u> : Week 1. In-person advising; explain how to develop a planning document/proposal for their applied toxicology project during their internship. <u>Assessment Opportunity</u> : Week 3. Review internship document/proposal with student/internship advisor; provide feedback and guidance to student and internship supervisor; written report is graded and considers appropriate literature review and context for the planned project.
2. Analyze project that uses toxicology principles and methods in a professional setting (public or private sector).	ENV H 599: Field Studies (Internship)	<u>Didactic Opportunity</u> : Weeks 1-7. Students conduct a supervised field study toxicology project at an internship site, and analyze the data/results obtained. <u>Assessment Opportunity</u> : Weeks 8-10. Student writes and submits a written report on the applied toxicology project as a culminating experience; graded by advisor with input from internship supervisor.
3. Developing professional communication tools for a career in applied toxicology.	ENV H 598: Degree Program/Project Portfolio	<u>Didactic Opportunity</u> : Weeks 1-4. Guide student in the assembly of a curriculum vitae/resume; how to construct a LinkedIn page (or other suitable platform for professional development) describing their skills and professional accomplishments. <u>Assessment Opportunity</u> : Week 10. Assessed by evaluation of completeness and accuracy of CV/Resume and LinkedIn page as communication tools for presenting the student's skills and readiness for a career in applied toxicology.

Assessment of Competencies for Academic Master's Degree		Epidemiology, General: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Select appropriate statistics for an epidemiologic study that addresses a specific research question, calculate the statistical power/sample size, and present this information in a manner appropriate for a grant proposal.	EPI 514: Application of Epidemiologic Methods	<u>Didactic Opportunity</u> : Week 2, 3, 4. Lectures on analysis of survey data, including selection of appropriate statistics, confounding, effect modification, precision variables, stratified analyses, and power and sample size calculations. Examples are presented using R and Stata. <u>Assessment Opportunity</u> : Week 4. Students work in groups to write a proposal for an epidemiologic analysis of Behavioral Risk Factors Surveillance System data, which includes an analysis plan and power/sample size calculations. The proposal is submitted and graded as a group and the faculty preceptor provides individual feedback regarding each student's contribution.
2. Identify major epidemiologic research study designs, and their strengths and limitations, and identify major sources of bias in epidemiologic research and approaches to mitigate them.	EPI 512: Epidemiologic Methods I	<u>Didactic Opportunity</u> : Week 3, 4. Lectures on the major epidemiologic study designs, their strengths and weaknesses, and how to select an appropriate design. Week 9, 10. Lectures on confounding as a source of bias in epidemiologic research. <u>Assessment Opportunity</u> : Week 4, 7. Problem set 4, focus on identification and selection of study designs. The midterm includes questions on study designs. The final includes questions on confounding and its control, as well as other sources of bias. Assessed individually.
3. Write scientific descriptions of the rationale, methods, results, and interpretation of epidemiologic studies suitable for publication in peer-reviewed journals.	EPI 514: Application of Epidemiologic Methods	<u>Didactic Opportunity</u> : Weeks 5-7. Lectures focus on approaches to writing the introduction, methods, results, and discussion sections of a scientific paper. <u>Assessment Opportunity</u> : Week 10. Students work in groups to write and submit a paper that describes the findings of their analysis of Behavioral Risk Factors Surveillance System data. The final paper requires students to write a manuscript that includes the rationale, methods, results, and interpretation of a question requiring epidemiologic thinking about study design, confounding, and effect modification. The paper is submitted and graded as a group. The faculty preceptor provides individual feedback regarding each student's contribution.

Assessment of Competencies for Academic Master's Degree		Epidemiology, Clinical and Translational Research: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Characterize the measurement properties of biomarkers.	EPI 573: Methods and Issues in Using Biological Measurements in Epidemiologic Research	<u>Didactic Opportunity</u> : Week 3. Two lectures and a reading covering theory and practical aspects of assessing biomarker measurement error. Emphasis is on distinguishing biomarker reliability from biomarker validity. <u>Assessment Opportunity</u> : Week 3. The first homework assignment requires students to apply their knowledge of measurement error models to several examples in which biomarkers are employed in epidemiologic and clinical research. For example, the first question on this assignment asks students to compute several measures, including bias and the validity coefficient, for a hypothetical study of serum VLDL, and risk of stroke in a case-control study. Assessed individually.
2. Evaluate the properties of screening and diagnostic tests that inform the use of these measures in different clinical and population settings.	EPI 512: Epidemiologic Methods I	<u>Didactic Opportunity</u> : Week 7. One lecture and a textbook chapter reading covering the settings in which screening is appropriate and the attributes that make a screening or diagnostic test suitable for use in targeted clinical settings and/or broader population settings. Emphasis is placed on quantifying and interpreting the sensitivity, specificity, positive and negative predictive value of screening tests. <u>Assessment Opportunity</u> : Week 7. A problem set assignment (problem set 10) requires students to demonstrate their evaluation of test properties, by applying measures of screening test validity, calculating sensitivity, specificity, positive and negative predictive value, interpreting these quantities, and demonstrate their understanding of the difference between them. For example, the first question on this assignment asks students to calculate the sensitivity and specificity of a hypothetical screening test, and to estimate the positive predictive value of that test in different population settings. Assessed individually.
3. Critically evaluate and interpret clinical trials and non-randomized evidence for the efficacy and generalizability of therapeutic treatments.	EPI 542: Clinical Epidemiology	<u>Didactic Opportunity</u> : Weeks 4-6. Includes lectures and readings focused on evaluating the therapeutic efficacy of treatments using randomized and non-randomized study designs and the generalizability of randomized trial evidence. <u>Assessment Opportunity</u> : Week 10. The final includes questions that ask students to critically evaluate randomized and non-randomized evidence for treatment efficacy and limitations to the generalizability of such evidence.

The Health Services Department maintains a policy for the MS: **Health Services: General** degree. This policy can be found in the Electronic Resource files: Electronic Resource File\Criterion_D\ 3. MS_PhD_NonPH D17-19\D17.9\D17.9_HSERV_GeneralistDegreePolicy.

The policy includes five simple steps for each student to follow, with guidance from their academic and program advisors (both faculty and staff). Each student builds a plan of study and, with the support of advisors, determines tailored competencies to their area of study within Health Services. Five sample matrices are included within the Data Templates: Electronic Resource File\Other required materials\Data Templates, see Tab: D17-2 HSERV.

Assessment of Competencies for Academic Master's Degree		Health Services, Clinical and Translational Research: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity"
1. Describe the major sources of measurement error in observational and clinical research, and approaches to reducing it or mitigating the impact.	EPI 513: Epidemiologic Methods II	<p><u>Didactic Opportunity</u>: Week 4. Lecture: "Increasing the Sensitivity of Epi Studies." Chapter 10: "Measurement Error" in Weiss NS, Koepsell TD. Epidemiologic Methods: Studying the Occurrence of Illness, Second Edition. New York: Oxford University Press, 2014.</p> <p><u>Assessment Opportunity</u>: Problem sets and test questions addressing error and mitigation strategies such as problem set 6: "What were the outcome criteria, and how were they defined? Were there any safeguards taken to prevent knowledge of the "exposures" from biasing assessment of the outcome? What were they?"and, final question 1C: "The primary outcome of the trial was completion of a fecal immunochemical test, colonoscopy, or sigmoidoscopy. Such a composite outcome does not allow for a formal comparison of each of these types of screening modalities. What do you believe was the investigators' main rationale for choosing this primary outcome?"</p>
2. Select, perform, and interpret appropriate analytic methods for right-censored survival data, including the log-rank test for differences between survival curves.	BIOST 513: Medical Biometry III	<p><u>Didactic Opportunity</u>: Lectures, weeks 7-9. Chapters 1-2 in Kleinbaum and Klein, Survival Analysis: A Self-Learning Text (Third Edition) Springer, New York, 2012.</p> <p><u>Assessment Opportunity</u>: Problem set and final questions specifically addressing methods used for right-censored survival data such as final exam question 20: "Is there statistical evidence of a difference in time to recurrence of primary cancer or occurrence of second primary cancer (as presented by the log-rank test mentioned on the graph)?" Final question 8: "Do the curves in the Kaplan-Meier plot have to be parallel (same vertical distance at all time points) for the proportional hazards assumption to hold (for the variable(s)/level of variable(s) depicted in the Kaplan-Meier plot)." Problem set 9, question 1: "Failure (event) was defined as presence of genital ulcerations after all lesions during primary episode had resolved. Censoring occurred at the last clinic visit (without the event) or when the patient initiated long-term suppressive oral acyclovir therapy (variable: cens has a value of 0 for censored observation times and a value of 1 for patients who had the event: recurrence). (a) Plot Kaplan-Meier survival curves and 95% confidence intervals separately for males and females (variable: sex) and provide that plot. (b) Estimate the 25th, 50th and 75th percentile of time from end of primary episode to first recurrence (time by which 25%, 50% and 75% of subjects had recurred) separately for males and females. Present these estimates together with 95% confidence intervals. (c) Fit a Cox regression model with a single binary independent variable indicating gender for these data. Present the hazard ratio (HR) and 95% CI comparing females to males. (d) Write a one or two sentence summary interpreting the results in (c) like you would in a manuscript.</p>

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
3. Identify strategies for collaboration and change management in team science.	HSERV 590: Selected Topics in Health Services	<u>Didactic Opportunity</u> : Experiential learning in class during class sessions 2-4 of Spring Quarter, plus readings the following articles: "10 Principles for Leading through Change: A Navy Seal's Approach" and "The Psychology of Leading Change", as well as the course handout on the McKinsey 7-S Model for management. <u>Assessment Opportunity</u> : Individual reflection statement responding to how the McKinsey 7-S Model or other frameworks discussed in class could be applied in the effective management of change and improvement within multi-disciplinary clinical and translational research teams.

Assessment of Competencies for Academic Master's Degree		
Nutritional Sciences: Masters in Science		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Apply appropriate methodologies to a human nutrition research question.	NUTR 520: Nutrition and Metabolism I	<u>Didactic Opportunity</u> : Week 4, 7, 10. Students prepare for class through guided critical reading of peer-reviewed publications related to how each macronutrient group (proteins, week 4, carbohydrates, week 7, lipids, week 10) impact human nutritional status and/or health outcomes. The instructor assigns studies (2-4 per macronutrient) to small student groups (3-4 students per group) and highlights the different methodological approaches used to answer various nutrition-related research questions. <u>Assessment Opportunity</u> : Week 4, 7, 10. Students work in groups to discuss the guided discussion questions provided by the instructor, and then participate in an across-group facilitated discussion. One of the questions supplies a research question and asks groups to apply their assigned study methodologies to that question and discuss if the methods would be appropriate (if yes, justify why; if no, suggest a different methodological approach and justify). Individual responses to provided questions about all studies and methods (across groups) presented and discussed are submitted.

Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Translate knowledge and skills from Nutritional Sciences competencies to nutrition research or evidence-based clinical practice (when combined with dietetics training).	NUTR 562: Nutrition in Chronic Disease	<p><u>Didactic Opportunity:</u> Weeks 2-10. Readings, lectures, and discussions throughout the quarter explore medical nutrition therapy approaches for each chronic disease (CVD, diabetes, obesity, chronic kidney disease, various GI disorders, cancer, HIV/AIDS). For example, a reading assigned in week 3 is: Bohn L et al. Diet low in FODMAPs reduces symptoms of IBS as well as traditional dietary advice: a RCT. Gastroenterol 2015; 149: 1399-1407.</p> <p><u>Assessment Opportunity:</u> Week 1. Students are assigned to groups to work together in exploring the evidence for and against the effectiveness of several therapeutic diet approaches used in chronic disease treatment. Students collaborate to prepare and submit an annotated bibliography, on which each student's contribution is assessed individually, and deliver a presentation summarizing evidence for and against an assigned therapeutic diet and concluding with a recommendation based on their research. The annotated bibliography is due week 4 (draft) and week 9 (final). The therapeutic diet presentation takes place in week 10.</p>
3. Develop a presentation of a specific nutrition-related topic that integrates novel and/or recent findings with existing knowledge.	NUTR 521: Nutrition and Metabolism II	<p><u>Didactic Opportunity:</u> Weeks 1-3. Lectures on micronutrients set the stage for student selection of a controversial topic in micronutrient nutrition. Instructions regarding selection are discussed.</p> <p><u>Assessment Opportunity:</u> Week 10. Each student spends the quarter reviewing a current controversial topic in micronutrient nutrition, complete a literature review, and prepare a position paper on the topic. This assignment will develop over the quarter, and there are two different opportunities to workshop/peer review the paper in the class. Students submit papers for assessment and provide a short presentation of their topics during the last week of class.</p>

Assessment of Competencies for Academic Master's Degree		Genetic Epidemiology: Masters in Science
Competency	Course number(s) and name(s)	Describe specific assessment opportunity"
1. Illustrate theoretical knowledge of Linkage Disequilibrium, a fundamental population genetics property.	PHG 511: Genetic Epidemiology	<u>Didactic Opportunity</u> : Week 2. Didactics on linkage disequilibrium, a fundamental property of population genetics used to evaluate populations and genetic studies, including Hardy Weinburg equilibrium and linkage disequilibrium. Readings: "Patterns of linkage disequilibrium in the human genome." □ <u>Assessment Opportunity</u> : Week 2. In Homework assignment 1, students will calculate linkage disequilibrium in a population to illustrate theoretical knowledge of linkage disequilibrium in evaluating populations.
2. Design genetic epidemiology studies to identify novel genetic associations.	PHG 511: Genetic Epidemiology	<u>Didactic Opportunity</u> : Week 3, 4, 5, 7, 9. Different study designs are covered throughout the course, including week 3 study designs lecture, plus additional lectures on specific study designs like genetic association studies (week 4, lecture 7), rare variant analysis (week 5, lecture 10), mendelian randomization study design (week 9, lecture 17). Readings: week 5 "Genome-wide Association Studies in Ancestrally Diverse Populations: Opportunities, Methods, Pitfalls, and Recommendations;" week 5, "Rare-variant association analysis: study designs and statistical tests;" week 7, "Family-based designs in the age of large-scale gene-association studies;" week 9, "Recent Developments in Mendelian Randomization Studies." <u>Assessment Opportunity</u> : Week 10. Final part 2: Write a proposal designing an experiment to identify novel variants associated with breast cancer.
3. Apply an ethics framework to evaluate ethical implications of applications of genomic knowledge and technologies for disease prevention, screening, diagnosis, and/or treatment.	PHG 512: Legal, Ethical, and Social Issues in Public Health Genetics	<u>Didactic Opportunity</u> : Week 3. Lecture on ethics frameworks and assigned reading relevant to the evaluation of applications of genomic knowledge and technologies in public health: Childress, JF et al., Public Health Ethics: Mapping the Terrain, Journal of Law, Medicine & Ethics, 30 (2002): 170-178. <u>Assessment Opportunity</u> : Graded written assignment to select a controversial topic related to the application of genomics knowledge and technologies in public health and apply an ethics framework, which is graded to ensure inclusion of recognizing the ethical issues, reasoning through the issues via an ethics framework, identifying personal and professional responsibilities, and justifying a chosen response.

4) 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.

As is evident from the list of required coursework provided for each MS degree in D17.1, each student completing a MS degree is exposed to a variety of public health research methods in the context of a population health framework. All MS degrees require at least one Biostatistics course and several require an introductory Biostatistics sequence.

The majority of MS degree programs also require Epidemiology courses (and in some cases these are jointly listed with a Biostatistics course). These can range in complexity from BOST 511: Medical Biometry I and EPI 511: Introduction to Epidemiology to BOST/EPI 536: Categorical Data Analysis in Epidemiology, for example.

The discovery and/or translation aspects of research are covered in several ways, including the departmental or program seminar series, in exposure to various applications as part of biostatistics consulting, in specific areas of application in an aspect of the environment or occupational health, and so forth. The breadth of application and translation to a range of audiences is assured by the approved electives for each degree, and monitored by the student's master's degree committee. The instruction and assessment of these electives is typically equivalent to 4 or 5 quarter credits, roughly equivalent to 3 semester credits.

For students completing a capstone as part of their MS degree, additional supportive coursework, together with their capstone project partnership with an applied setting contribute to the students' ability to apply public health research methods in a variety of settings. The assessments of the capstone report, or the portfolio report, typically follow a primary reviewer model, with further evaluation by discussion with the student's entire capstone committee.

5) Briefly summarize policies and procedures relating to production and assessment of the final research project or paper.

Thesis topics for a Master of Science student must be agreed to by the student and their assigned advisor/thesis committee. The specific thesis topic may be nominated by an advisor, or be proposed by the student, provided a faculty member is qualified and agrees to advise the student on the topic they propose. The thesis must be independent research, which must also be documented fully and appropriately. Departments provide a tailored guide for department-specific processes.

The student meets with their faculty advisor and other faculty to learn about research opportunities early in the program. They attend seminars and other department events with faculty, meet further to discuss a thesis or capstone project, pick a project and select their thesis chair/advisory committee or a capstone site and committee, and complete any required forms and/or training necessary.

Students pursuing an MS degree with a thesis option typically begin working in earnest on their thesis topic in Autumn Quarter of their second year. The thesis represents the culmination of the master's program, and an opportunity to integrate and apply the concepts and methods learned in coursework, using rigorous methods appropriate to the research questions. Students are encouraged to write a thesis suitable for publication in a peer-reviewed journal. The assessment steps include: approval of the thesis proposal by the entire advisory committee; and the approval of the written thesis by the reading subcommittee of the advisory committee. In some programs, a presentation to peers and faculty is also required. The student is evaluated on both quality of the science in the relevant field (substance) and clarity of communication (written in all programs, with oral evaluation in some of the

MS degree programs, including Nutritional Sciences). The thesis must be submitted to the Graduate School by the end of the quarter in which the degree requirements are completed.

For students pursuing an MS degree with a capstone option instead of a thesis (as identified in D17.1), the capstone project is evaluated in concept and in final product by faculty advisors. The capstone option is typically an applied project, for which didactic support is offered (one or two courses), and the planning agreement documents are included in the student portfolio. In Biostatistics, the final report is the Individual Portfolio, that demonstrates data analysis, statistical programming, consulting experience with non-statisticians, written and oral communication skills, collaborative teamwork, and project management skills. In Nutritional Sciences, there is a separate Capstone Report that includes a statement of the specific issue for the target population addressed by the capstone work, a description of the organization and the target population, the methods of the investigation, an evidence analysis summary, a final product/executive summary, and a dissemination plan.

6) 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 school.

- Biostatistics: <http://www.biostat.washington.edu/program/degrees/ms/thesis/requirements>
- Epidemiology: <https://epi.washington.edu/sites/default/files/MS%20Handbook%202018.pdf>
- Health Services: <https://depts.washington.edu/hservms/thesis>
- Nutritional Sciences: https://nutr.uw.edu/wp-content/uploads/2019/11/NutrSciHandbook_2019_2020-1.pdf
 - <http://nutr.uw.edu/graduate-study/student-resources/>
- Public Health Genetics: <http://iphg.biostat.washington.edu/student-resources/forms-documents>

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D17.6.

7) Include completed, graded samples of deliverables associated with the major paper or project. The school must provide at least 10% of the number produced in the last three years or five examples, whichever is greater.

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D17.7.

8) Briefly explain how the school 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.

The SPH Curriculum and Educational Policy Committee (CEPC), established three options for programs to meet the basic public health knowledge requirements. The options were: 1. develop and require a new course based on public health knowledge; 2. incorporate the resources into existing courses; or 3. make resources available online and require that students complete assigned modules on their own. Each of the options, together with relevant additional requirements, was approved by CEPC as being equivalent to the content and assessments for a 3-credit semester course.

The following table illustrates how the basic public health knowledge requirements were implemented by each MS program.

Department/Program	Option 1. Created new course	Option 2. Incorporated resources into existing course	Option 3. Made resources available online	Additional option. Content covered in existing courses
Biostatistics	BIOST 504: Foundations of Public Health for Biostatistics		BIOST 504: Foundations of Public Health for Biostatistics	
Environmental and Occupational Health Sciences				ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants BIOST 511: Medical Biometry I BIOST 517: Applied Biostatistics I
Epidemiology		EPI 512: Epidemiologic Methods I EPI 583: Epidemiology Seminar	EPI 583: Epidemiology Seminar	
Health Services		HSERV 592: Program Seminars	HSERV 592: Program Seminars	HSERV 511: Introduction to Health Services and Public Health EPI 512: Epidemiologic Methods I
Nutritional Sciences				NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context NUTR 531: Public Health Nutrition NUTR 562: Nutrition and Chronic Disease BIOST 511: Medical Biometry I
Public Health Genetics	BIOST 504: Foundations of Public Health for Biostatistics		BIOST 504: Foundations of Public Health for Biostatistics	

- 9) **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.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D17.9.

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

Strengths

- SPH provides a broad range of master of science programs.

Weaknesses/Plans for improvement

- Despite monthly meetings of the Curriculum and Education Policy Committee (CEPC), that brings together faculty, student representatives, and ex officio Office of the Dean representation, coherence in approach to validating master's students Foundational Public Health Knowledge is still evolving. A single online course for the 12 CEPH Competencies is being developed with the goal of implementing no later than the 2021-22 academic year.
- Some students find the number of different MS degrees to be confusing. The Environmental and Occupational Health Sciences department is currently in the process of reviewing and revising their Master of Science degrees to offer fewer unique degrees and provide students more flexibility to decide during their first quarter of study which track they wish to pursue.

D18. Academic Public Health Doctoral Degrees

- 1) List the curricular requirements for each non-DrPH 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 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 will present a separate list for each degree program and concentration as appropriate, per department and program

The curricular requirements for each PhD degree option are below and can be found on the associated web pages provided as well. Gold shading in the tables below indicates PhD-only curricular elements.

Biostatistics

The U.S. News and World report has ranked the UW Department of Biostatistics among the top in Biostatistics programs since 2011. The department is known for its mathematical rigor, and the core coursework for the *Biostatistics* doctoral degree includes a year-long sequence in more advanced statistical theory than is required in most other Biostatistics PhD programs nationwide. This sequence is not taken by students pursuing the MS in Biostatistics. Thus, while MS students may apply or evaluate biostatistical methods in the MS theses, PhD students are expected both to develop and to evaluate new biostatistical methodology in their dissertations.

A unique and attractive feature of the Biostatistics doctoral program is the option for students to choose one of two PhD pathways: the general pathway or the statistical genetics pathway. Because of their strong theoretical, computational, and methodological training, and their required coursework in the sciences, biostatistics graduates from both of these PhD pathways continue to be in high demand for positions in academia, at research institutes, government, and public health agencies, as well as technology companies, including Amazon, Google, and Microsoft.

PhD: Biostatistics	Minimum
Core requirements for	37 credits
STAT 512: Statistical Inference	4
STAT 513: Statistical Inference	4
BIOST 533: Theory of Linear Models	3
BIOST 514: Biostatistics I	4
BIOST 515: Biostatistics II	4
STAT 581: Advanced Theory of Statistical Inference	3
STAT 582: Advanced Theory of Statistical Inference	3
STAT 583: Advanced Theory of Statistical Inference	3
BIOST 570: Advanced Regression Methods for Independent Data	3
BIOST 571: Advanced Regression Methods for Dependent Data	3
BIOST 572: Advanced Regression Methods: Projects	3
Degree Option Specific Requirements	22 credits
BIOST 504: Foundations of Public Health for Biostatistics	2
BIOST 580: Seminar in Biostatistics	9
BIOST 561: Computational Skills for Biostatistics I	2

BIOST 590: Biostatistical Consulting	3
Methodological Emphasis or Biology of Public Health Emphasis	6 or 9

<https://www.biostat.washington.edu/academics/phd/courses>

Students who choose the *Statistical Genetics* pathway take required elective courses in genetics/genomics, and receive interdisciplinary training in statistics and genetics so that they are equipped with the necessary tools to be at the interface of cutting-edge biomedical genetic research.

PhD: Statistical Genetics	Minimum
Core requirements	45 credits
BIOST 514: Biostatistics I	4
BIOST 515: Biostatistics II	4
BIOST 533: Theory of Linear Models	3
BIOST 570: Advanced Regression Methods for Independent Data	3
STAT 512: Statistical Inference	4
STAT 513: Statistical Inference	4
STAT 581: Advanced Theory of Statistical Inference	3
STAT 582: Advanced Theory of Statistical Inference	3
STAT 583: Advanced Theory of Statistical Inference	3
BIOST 550: Statistical Genetics II: Mendelian Traits	3
BIOST 551: Statistical Genetics II: Quantitative Traits	3
GENOME 540: Introduction to Computational Molecular Biology: Genome and Protein Sequence Analysis, or GENOME 541: Introduction to Computational Molecular Biology: Molecular Evolution	4
GENOME 562: Population Genetics	4
Additional Requirements	15 credits
BIOST 504: Foundations of Public Health for Biostatistics	2
BIOST 581: Statistical Genetics Seminar	9
BIOST 590: Biostatistical Consulting	3
Elective from List: Methodological Emphasis or Biology or Public Health Emphasis	6 or 1

<https://www.biostat.washington.edu/academics/phd/courses>

Environmental and Occupational Health Sciences

Two doctoral degrees are offered by the Department of Environmental and Occupational Health Sciences.

The PhD degree in *Environmental Toxicology* trains students to identify, understand, and analyze toxic agents and their effects on human health and the environment. The curriculum includes courses in Biostatistics and Epidemiology, as well as foundational courses in Exposure Science and Environmental Health, in common with the MS degree. Additional courses, tailored to PhD students, provide in-depth training in risk assessment and the fundamentals of Toxicology, including organ system toxicology and the effects and mechanisms of toxicity of a wide range of toxic agents. Students in this degree option conduct in-depth toxicological research on topics such as neurological, hepatic, renal, and respiratory systems; prenatal and neonatal development; and the carcinogenic and genetic effects of toxicants. Graduates find careers in a range of private, public, and academic positions.

PhD: Environmental Toxicology	Minimum
Core requirements	23 credits
ENV H 501: Foundations of Environmental and Occupational Health	4
ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4

ENV H 583: Thesis Research Proposal Preparation	2
ENV H 580 Environmental and Occupational Health Sciences Seminar	6
BIOST 511: Medical Biometry I	4
EPI 511: Introduction to Epidemiology	4
Degree Option Requirements	23 credits
ENV H 514: Fundamentals of Toxicology	3
ENV H 515: Organ System Toxicology	3
ENV H 516: Toxic Agents: Effects and Mechanisms	3
ENV H 591: Current Topics in Toxicology	2-6
ENV H 593: Current Topics in Risk Assessment	2-6
ENV H 595: Research Rotation	6 or 9
Choose two courses from:	6 credits
ENV H 531: Neurotoxicology	3
ENV H 532: Reproductive and Developmental Toxicology	3
ENV H 533: Molecular Toxicology	3
ENV H 534: Biochemical Toxicology of the Puget Sound	3
ENV H 577: Risk Assessment for Environmental Health Hazards	4

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_PhD_ET.pdf

The PhD in *Environmental and Occupational Hygiene* degree trains scientists and professionals to recognize, evaluate, and prevent exposures that may increase the risk of disease or injury. Similar to the PhD in Environmental Toxicology, the curriculum includes courses in Biostatistics and Epidemiology, as well as foundational courses in Exposure Science and risk assessment, in common with the MS degree. Additional courses, tailored to PhD students, provide in-depth training in the environmental chemistry of pollution and exposure monitoring methods. Research topics include biological, chemical, and physical hazard assessment and controls; respiratory, reproductive, and chronic diseases; epidemiology of occupational and environmental cancers; bio-monitoring and medical surveillance; and occupational or environmental health policy. Graduates find careers in a range of private, public, and academic positions.

PhD in Environmental and Occupational Hygiene	Minimum
Core requirements	23 credits
BIOST 511: Medical Biometry I OR, BIOST 517: Applied Biostatistics I	4
EPI 511: Introduction to Epidemiology	4
ENV H 501: Foundations of Environmental and Occupational Health	4
ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	4
ENV H 583: Thesis Research Proposal Preparation	2
ENV H 580: Environmental and Occupational Health Sciences Seminar	6
Degree Option Specific Requirements	36 credits
BIOST 512: Medical Biometry II or BIOST 518: Applied Biostatistics II	4
ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	4
Core science courses from a single discipline	11
ENV H 552: Environmental Chemistry of Pollution	4
ENV H 553: Environmental Exposure Monitoring Methods	4
ENV H 555: Instrumental Methods for Industrial Hygiene Measurement: Laboratory	3
ENV H 595: Research Rotation	6 or 9

https://deohs.washington.edu/sites/default/files/degree-materials/Degree_Reqs_Comps_PhD_EOH.pdf

Epidemiology

The doctoral program in *Epidemiology* is intended to produce future academicians, highly qualified as independent investigators and teachers, as well as well-trained practitioners of Epidemiology. All candidates must have completed prior graduate training to the master's (or doctoral) degree level, usually in a health-related field. The course requirements listed below include, but go beyond, the required courses for the MS degree and ensure that doctoral students are well-rounded in substantive and methodological areas of Epidemiology, and that they have the statistical capabilities necessary for addressing complex research questions. Seattle is an international hub for population health and medical sciences, enabling students to conduct highly multidisciplinary research. The early collegial environment that was evident when the School began remains today: faculty respect students as colleagues, and learn as much from them as students learn from faculty.

PhD: Epidemiology	Minimum
Core requirements	38 credits
BIOST 511, 512, 513 series: Medical Biometry I-III or BIOST 517, 518 series: Applied Biostatistics I-II	12 or 8
EPI 512: Epidemiologic Methods I	4
EPI 513: Epidemiologic Methods II	4
EPI 510: Epidemiologic Data Analysis	3
EPI 514: Application of Epidemiologic Methods	5
EPI 515: Advanced Epidemiologic Methods I	4
EPI 584: Doctoral Dissertation Seminar	1 or 2
EPI 536: Categorical Data Analysis in Epidemiology	4
EPI 537: Survival Data Analysis in Epidemiology	4
EPI 516: Advanced Epidemiologic Methods II	4
EPI 588: Preparing, Writing, and Critiquing Scientific Research Proposals	3
EPI 583: Epidemiology Seminar	1-5
EPI 591: Current Literature in Epidemiology	1-5
Degree Option Specific Requirements	25 credits
One EPI Non-Infectious Disease (NI) Course	4
One additional EPI Elective Course	4
Three SPH Electives Courses	4

<https://epi.washington.edu/phd-students>

Global Health

The PhD in *Global Health: Metrics and Implementation Science* has two tracks. Only the track in Implementation Science is in the School of Public Health and hence this is the only track discussed herein. (The other track, in Metrics, is located in the School of Medicine). This is the first PhD in Implementation Science to launch globally, and continues to be the only program of its kind in the U.S. Graduates are prepared for careers in academia, in ministry of health leadership, and in foundations, non-governmental organizations, and other research-related positions.

The curriculum covers a broad range of relevant implementation science material, including formal implementation science theories/models/frameworks, mixed methods study designs, quantitative data analysis (and most students also pursue qualitative methodologies), and material on grant and manuscript development. The rigor and independence expected of these students is well beyond that which is generally expected of students in master's degree programs.

PhD: Global Health: Metrics and Implementation Science	Minimum
Core requirements	43 credits
PABIO 550: Diseases and Issues in Global Health	2
G H 511: Problems in Global Health	4
G H 535: Advanced Methods for Global Health I	4
G H 536: Advanced Methods for Global Health II	4
G H 537: Advanced Methods for Global Health III	4
G H 541: Fundamentals of Implementation Science in Global Health	4
G H 580: Global Health Doctoral Seminar	4
EPI 512: Epidemiologic Methods I	4
EPI 512: Epidemiologic Methods II	4
Quantitative Methods	8
Leadership, Policy, and Management	3
Degree Option Specific Requirements	16 credits
Metrics: Advanced Quantitate Methods	8
Metrics: Global Health Measurement or Implementation Science: Advanced Health Systems Research Methods	4 or 8
Implementation Science: Operations Research/Modeling	4
Electives	16 credits

<https://globalhealth.washington.edu/education-training/phd-gh/curriculum>

As a discipline, *Pathobiology* integrates fundamental concepts in biology, medicine, and public health, particularly as applied to infectious diseases of global health importance. The PhD program applies a multidisciplinary approach as well as state of the art research technologies to the study of viral, bacterial, and parasitic diseases, as well as other disease processes. By investigating the mechanisms underlying multifactorial diseases, the program emphasizes the preventive as well as the curative, and a broader view of disease etiology. The program applies the research tools of molecular biology, cell biology, immunology, pathology, and genetics to dissect host/pathogen interactions and disease processes to inform vaccine development and therapeutic strategies.

PhD: Pathobiology	Minimum
Core requirements	54 credits
PABIO 550: Diseases and Issues in Global Health	2
PABIO 551: Biochemistry and Genetics of Pathogens and Their Hosts	4
PABIO 552: Cell Biology of Human Pathogens and Disease	4
PABIO 553: Survival Skills for Scientific Research	2
PABIO 580: Pathobiology Seminar	4
PABIO 581: Current Literature in Pathobiology	3
PABIO 582: Critical Thinking and Research Design in Pathobiology	3
PABIO 591: Rotating Pathobiology Minicourses	4
PABIO 598: Didactic Pathobiology	2
EPI 511: Introduction to Epidemiology	4
UCONJ 510: Introduction to Laboratory Based Biostatistics	2
HSERV 579: Structural Racism and Public Health	1
Immunology (IMMUN 441: Introduction to Immunology or IMMUN 532: Intersection of Innate and Adaptive Immunity in Disease)	4
Rotation	9
Research	var
Dissertation	var
Two Electives	6

<https://globalhealth.washington.edu/education-training/phd-pathobiology/handbooks-resources>

Health Services

The PhD program in *Health Services* offers a strong interdisciplinary core curriculum that includes, but goes beyond, the core courses of the MS degree, with strong training in advanced methods, depth in a chosen area of emphasis, and a required dissertation that represents independent research resulting in three manuscripts to be published in peer-reviewed literature. The breadth of training and research conducted by doctoral students is supported by faculty from various disciplines, including social and behavioral sciences and social policy, and by faculty from within the UW, as well as from partner institutions such as Kaiser Permanente Washington Research Institute and the Veteran's Health Administration. The program is designed to prepare graduates for research careers in universities, and to be leaders in health services research and policy-making organizations, in the health care industry, and in government agencies.

PhD: Health Services	Minimum
Core requirements	54 credits
HSERV 512: Health Systems and Policy	3
HSERV 513: Health Policy Research	3
HSERV 514: Social Determinants of Population Health and Health Disparities	3
HSMGMT 514: Health Economics	4
HSERV 522: Health Program Evaluation	4
HSERV 523: Advanced Health Services Research Methods I: Large Public Databases; Big Data	4
HSERV 524: Advanced Health Services Research Methods II: Hierarchical and Incomplete Data	4
HSERV 525: Advanced Health Services Research Methods III: Causal Inference Using Observational Data	4
HSERV 579: Structural Racism and Public Health	1
HSERV 578: Preparing, Writing, and Critiquing Scientific Research Proposals	3
BIOST 511: Medical Biometry I	4
BIOST 512: Medical Biometry II	4
BIOST 513: Medical Biometry III	4
EPI 512: Epidemiologic Methods I	4
EPI 513: Epidemiologic Methods II	4
CS&SS 508: Introduction to R for Social Scientists	1
Degree Option Specific Requirements	13 credits
HSERV 592: Program Seminars	10
One Theory course from approved list	3-4

<http://depts.washington.edu/hservphd/courses>

Nutritional Sciences

Historically, the *Nutritional Sciences* PhD focused on lab-based and clinical research and drew heavily on mentors from the UW School of Medicine. Over time, the interests of PhD applicants and students have shifted to public health nutrition, especially nutritional epidemiology, drawing heavily on mentors with joint appointments at the Fred Hutchinson Cancer Research Center. With an expanding body of faculty research in food systems and the launch of a new undergraduate major in Food Systems, Nutrition, and Health, the program is also experiencing growing demand for a food systems focus in the graduate curriculum. Although some of the core coursework is shared by MS and PhD students, PhD students continue with advanced coursework and/or mentorship in systems modeling and assessment, as well as in policy development, implementation, and evaluation as necessary components of their dissertation projects. Graduates of the PhD in Nutritional Sciences have gone on to conduct research, have assumed leadership positions in nutrition science and policy, and hold academic positions, including as nutritional epidemiologists, at several colleges and universities. It is anticipated that future graduates will be prepared to assume leadership roles in identifying and defining new system-wide approaches to health challenges and their management, including

activities in academic research, governmental policy and regulatory work, as well as advocacy and assessment work in non-governmental agencies.

PhD: Nutritional Sciences	Minimum
Core requirements	35 credits
NUTR 500: Food Systems, Nutrition and Health Seminar	1
NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	2
NUTR 520: Nutrition and Metabolism I	3
NUTR 521: Nutrition and Metabolism II	3
NUTR 529: Nutrition and Research Design	2
NUTR 531: Public Health Nutrition	5
NUTR 562: Nutrition and Chronic Disease	4
Additional 500-level Nutrition courses	12
Degree Option Specific Requirements	43 credits
Other Sciences (related to specific interests)	22
EPI 511: Introduction to Epidemiology or EPI 512/513: Epidemiologic Methods I-II	4-8
Biostatistics	8-12
Research Methods	8-12
Undoing Racism in Public Health	1

<http://nutr.uw.edu/graduate-study/doctor-of-philosophy-2/phd-curriculum/>

Public Health Genetics

The PhD program in *Public Health Genetics* started in 2003, and provides interdisciplinary education in the core knowledge areas of public health genetics (genetic and molecular epidemiology; ecogenetics and pharmacogenomics; clinical aspects of genomics; ethics and social science; law and policy; health economics; and outcomes research) so that graduates can address scientific and policy questions from a variety of perspectives. Graduates of the program are highly-qualified individuals equipped for careers and leadership roles in academic institutions, health care delivery systems, public health departments, government agencies, and the private sector.

PhD: Public Health Genetics	Minimum
Core requirements	36 credits
EPI 511: Introduction to Epidemiology or EPI 512/513: Epidemiologic Methods I-II	4 or 8
BIOST 511: Medical Biometry I or BIOST 517: Applied Biostatistics I-II	4
ENV H 511: Environmental and Occupational Health or ENV H 570: Occupational and Environmental Epidemiology	3
HSERV 510: Social and Behavioral Sciences in Health Program Planning and Implementation or HSERV 511: Introduction to Health Services and Public Health	3
PHG 511: Genetic Epidemiology	3
PHG 513: Basic Concepts in Pharmacogenetics and Toxicogenomics	3
GENOME 565: Advanced Human Genetics	4
PHG 512: Legal, Ethical, and Social Issues in Public Health Genetics	3
PHG 521: Culture, Society, and Genomics	3
PHG 523: Genetics and the Law	3
PHG 527: Social Science Research Methods	3
Degree Option Specific Requirements	6 credits
PHG 580: Interactive Seminar	6

<http://iphg.biostat.washington.edu/programs/phd>

- 2) Provide a matrix, in the format of Template D18-1, that indicates the required assessment opportunities for each of the defined foundational public health learning objectives (1-12). Typically, the school will present a separate matrix for each degree program, but matrices may be combined if requirements are identical.

Content Coverage for Academic Doctoral Degree		Biostatistics: Doctor of Philosophy Statistical Genetics: Doctor of Philosophy
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture drawn from CDC material. <u>Assessment Opportunity</u> : Week 10. Students write a term paper, synthesizing how public health foundations relate to a chosen health condition (a major cause of morbidity/mortality) and how an understanding of the foundations of public health will impact the student's work as a biostatistician.
2. Identify the core functions of public health and the 10 Essential Services*	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture on core functions, week 3. Lecture and video on 10 essential services. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material which introduces and applies the core functions of public health and the 10 Essential Services. (Pre-Quiz 2 Q1-6, Post-Quiz 2 Q1-2)
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Video and article on quantitative vs qualitative methods and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the role of quantitative and qualitative studies. (Pre-Quiz 3 Q1-5, Post-Quiz 3 Q1-3)
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 2. Video and readings on causes of mortality and lecture. <u>Assessment Opportunity</u> : Week 2. Students complete two quizzes with questions relating to assigned material on major causes and trends of morbidity and mortality in the US and China. (Pre-Quiz 1, Post-Quiz 1)
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 3. Lecture on primary, secondary, and tertiary prevention in population health. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material on primary, secondary, and tertiary prevention. (Pre-Quiz 2 Q7-10, Post-Quiz 2 Q3-5)
6. Explain the critical importance of evidence in advancing public health knowledge	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Article on the importance of evidence and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the importance of evidence in advancing public health knowledge. (Pre-Quiz 3 Q6-10, Post-Quiz 3 Q4-5)

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
7. Explain effects of environmental factors on a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Videos and reading on air pollution and on environmental influences on health and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on effects of environmental factors on a population's health. (re-Quiz 4 Q1-5, Post-Quiz 4 Q1-2)
8. Explain biological and genetic factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Video on genetic and environmental influences on health, readings on biological and genetic factors and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on biological and genetic factors that affect a population's health. (Pre-Quiz 4 Q6-10, Post-Quiz 4 Q3-5)
9. Explain behavioral and psychological factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Videos on physical activity and cardiovascular health. and social determinants of health; lecture and discussion. <u>Assessment Opportunity</u> : Week 8. Students complete two quizzes with questions relating to assigned material on behavioral and psychological factors that affect a population's health. (Pre-Quiz 6 Q1-5, Post-Quiz 6 Q1-2)
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Readings on health and income inequality and discussion. <u>Assessment Opportunity</u> : Week 6. Students complete two quizzes with questions relating to assigned material on social, political, and economic determinants of health, and how they contribute to population health and health inequities. (Pre-Quiz 6 Q6-10, Post-Quiz 6 Q3-5)
11. Explain how globalization affects global burdens of disease	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Reading on globalization and health and lecture. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on how globalization affects global burdens of disease. (Pre-Quiz 7 Q1-5, Post-Quiz 7 Q1-2)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Readings on One Health and planetary health. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on the connections among human health, animal health, and ecosystem health. (Pre-Quiz 7 Q6-10, Post-Quiz 7 Q3-5)

Content Coverage for Academic Doctoral Degree		Environmental and Occupational Hygiene: Doctor of Philosophy
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. Lecture: EOH approach, history of public health and environmental health. Reading: History of Public Health. <u>Assessment Opportunity</u> : Midterm, final. Questions on history of public and environmental health.
2. Identify the core functions of public health and the 10 Essential Services*	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Session 2. Assigned reading: Environmental Public Health Services. <u>Assessment Opportunity</u> : Midterm. Define core functions and 10 essential services.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants BIOST 511: Medical Biometry I or BIOST 517: Applied Biostatistics I	ENV H 502 <u>Didactic Opportunity</u> : Week 1-2. Lesson 3, 4. Application of exposure factors and questionnaires (Lecture topic lesson 3). Reading: USEPA exposure factor handbook (ch1, 2, 5; questionnaires and exposure assessment lecture (lesson 4, reading: ch 2.1-2.10, 5.1-5.2, and 5.4-5.10 in the textbook, "Exposure Assessment in Environmental Epidemiology"). <u>Assessment Opportunity</u> : Week 3. Homework #1 q#1: compare and contrast different questionnaires and assessment methods; q#2: quantitative application of exposure factors to different populations and individuals.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Section 16. Reading IHME Global Burden of Disease Risk Factor paper. In class lecture on Global Burden of Disease Study. <u>Assessment Opportunity</u> : Final. Questions about global burden of disease, including major causes and trends of morbidity and mortality.
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. EOH approach: didactic presentation of Leavell's levels of prevention. <u>Assessment Opportunity</u> : Midterm, final. Questions about levels of prevention.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
6. Explain the critical importance of evidence in advancing public health knowledge	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 503 <u>Didactic Opportunity</u> : Week 8. Session 22. Lecture on heavy metals; evidence that removing lead from gasoline resulted in decreases in blood lead levels. <u>Assessment Opportunity</u> : Week 10. Final Exam question: what was the effect of the policy to remove lead from gasoline on population blood lead levels and describe the likely impact this has on IQ in children.
7. Explain effects of environmental factors on a population's health	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 503 <u>Didactic Opportunity</u> : Week 6, Session 16. Lecture on cardiopulmonary toxicology; effects of ambient air pollution on pulmonary and cardiovascular diseases; readings, chapters 15, 16, 29 of the text (Casarett & Doull's Essentials of Toxicology, 3e). <u>Assessment Opportunity</u> : Week 7, Session 21. Second midterm. Question on the effects of air pollution (specifically traffic related air pollution and near roadway proximity) on the risk of cardiovascular diseases.
8. Explain biological and genetic factors that affect a population's health	ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 503 <u>Didactic Opportunity</u> : Week 2, Session 6. Factors that modify the response to toxicants (includes age/developmental status; sex; genetics; disease status; nutrition/diet/microbiome). Readings include Chapters 2. <u>Assessment Opportunity</u> : Week 3, Session 12. Midterm 1. Questions on the effects of genetic polymorphisms in biotransformation enzymes on the disposition of aromatic amines and urinary tract cancer; question on the impact of dietary cruciferous vegetables on induction of protective biotransformation enzymes and the risk of aflatoxin-induced liver cancer.
9. Explain behavioral and psychological factors that affect a population's health	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 502 <u>Didactic Opportunity</u> : Week 1, 2. Lesson 3, 4. Application of exposure factors and questionnaires (Lecture topic lesson 3). Reading: USEPA exposure factor handbook (ch1, 2, 5; questionnaires and exposure assessment lecture (lesson 1-4, reading: ch 1, 2.1-2.10, 5.1-5.2, and 5.4-5.10 in the textbook, "Exposure Assessment in Environmental Epidemiology"). <u>Assessment Opportunity</u> : Week 3: Homework #1 q#1: contrast questionnaires and assessment methods based on behavior; q#3: conduct quantitative application of exposure factors to different populations of children of different ages, with different activity levels (i.e. behaviors); q#4 Describe how different behaviors lead to exposure scenarios for anthrax. Final, q#3: provide a detailed population exposure assessment for either wood smoke or chemical exposures, that accounts for behavior and population factors (income, housing, water supply access, etc.) that may alter exposure.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 501 <u>Didactic opportunity</u> : Session 3. Readings on environmental justice in Hawaii, lecture on Environmental Justice. <u>Assessment opportunity</u> : Final group project. Explain social political and economic aspects of an environmental problem. Example: 2019 student project on wildfires and workers.
11. Explain how globalization affects global burdens of disease	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Section 17. Reading: Lancet Planetary Health Report. <u>Assessment Opportunity</u> : Final. Questions about globalization and urbanization on global burden of disease.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. Didactic lecture on EOH approach, including One Health systems model. <u>Assessment Opportunity</u> : Week 4. Graded concept map 1: Yakima ground water, students need to consider human, animal, and environmental aspects.

Content Coverage for Academic Doctoral Degree		
Environmental Toxicology: Doctor of Philosophy		
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. Lecture: EOH approach, history of public health and environmental health. Reading: History of Public Health. <u>Assessment Opportunity</u> : Midterm, final. Questions on history of public and environmental health.
2. Identify the core functions of public health and the 10 Essential Services*	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Session 2. Assigned reading: Environmental Public Health Services. <u>Assessment Opportunity</u> : Midterm. Define core functions and 10 essential services.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants BIOST 511: Medical Biometry I or BIOST 517: Applied Biostatistics I	ENV H 502 <u>Didactic Opportunity</u> : Week 1-2. Lesson 3, 4. Application of exposure factors and questionnaires (Lecture topic lesson 3). Reading: USEPA exposure factor handbook (ch1, 2, 5; questionnaires and exposure assessment lecture (lesson 4, reading: ch 2.1-2.10, 5.1-5.2, and 5.4-5.10 in the textbook, "Exposure Assessment in Environmental Epidemiology"). <u>Assessment Opportunity</u> : Week 3. Homework #1 q#1: compare and contrast different questionnaires and assessment methods; q#2: quantitative application of exposure factors to different populations and individuals.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Section 16. Reading IHME Global Burden of Disease Risk Factor paper. In class lecture on Global Burden of Disease Study. <u>Assessment Opportunity</u> : Final. Questions about global burden of disease, including major causes and trends of morbidity and mortality.
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. EOH approach: didactic presentation of Leavell's levels of prevention. <u>Assessment Opportunity</u> : Midterm, final. Questions about levels of prevention.
6. Explain the critical importance of evidence in advancing public health knowledge	ENV H 501: Foundations of Environmental and Occupational Health ENV H 514: Fundamentals of Toxicology	ENV H 514 <u>Didactic Opportunity</u> : Week 2. Principles and mechanisms 1. Lecture on toxicant dose-response relationships; the application of these relationships to the calculation of relative toxicity (e.g. AC50s, benchmark doses), and their usefulness in estimating population heterogeneity and individual susceptibility for purposes of regulatory policy. <u>Assessment Opportunity</u> : Week 2. Quiz: How do we characterize individual dose-response relationships (e.g., graded responses) vs. population dose-response relationships (e.g., quantal responses), and how is such information used to establish toxicological hazard?

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
7. Explain effects of environmental factors on a population's health	ENV H 501: Foundations of Environmental and Occupational Health ENV H 514: Fundamentals of Toxicology ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 514 <u>Didactic Opportunity</u> : Week 8. Carcinogenesis lecture: aflatoxin and liver cancer; environmental impacts of food storage environment (e.g., humidity), aspergillus mold growth, and aflatoxin content; evidence of synergy between endemic hepatitis virus infection and aflatoxin B1 exposure for risk of developing liver cancer. <u>Assessment Opportunity</u> : Week 8. Poll Everywhere and final; what are the principle means by which aflatoxin metabolism leads to liver DNA adducts and mutagenesis; how does hepatitis B infection impact rates of liver cancer alone or in combination with aflatoxin exposure (including populations worldwide)?
8. Explain biological and genetic factors that affect a population's health	ENV H 514: Fundamentals of Toxicology ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 514 <u>Didactic Opportunity</u> : Week 2. Mechanisms underlying the response to toxicants (includes age/developmental status; sex; genetics; disease status; nutrition/diet/microbiome). Readings include Chapters 2 and 3. <u>Assessment Opportunity</u> : Week 3. Block 1 exam: questions on the effects of epigenetic modulation of biotransformation enzymes on the disposition of toxicants; question on the impact of dietary cruciferous vegetables on induction of protective biotransformation enzymes.
9. Explain behavioral and psychological factors that affect a population's health	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 502 <u>Didactic Opportunity</u> : Week 1, 2. Lesson 3, 4. Application of exposure factors and questionnaires (Lecture topic lesson 3). Reading: USEPA exposure factor handbook (ch1, 2, 5; questionnaires and exposure assessment lecture (lesson 1-4, reading: ch 1, 2.1-2.10, 5.1-5.2, and 5.4-5.10 in the textbook, "Exposure Assessment in Environmental Epidemiology"). <u>Assessment Opportunity</u> : Week 3: Homework #1 q#1: contrast questionnaires and assessment methods based on behavior; q#3: conduct quantitative application of exposure factors to different populations of children of different ages, with different activity levels (i.e. behaviors); q#4 Describe how different behaviors lead to exposure scenarios for anthrax. Final, q#3: provide a detailed population exposure assessment for either wood smoke or chemical exposures, that accounts for behavior and population factors (income, housing, water supply access, etc.) that may alter exposure.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants	ENV H 501 <u>Didactic opportunity</u> : Session 3. Readings on environmental justice in Hawaii, lecture on Environmental Justice. <u>Assessment opportunity</u> : Final group project. Explain social political and economic aspects of an environmental problem. Example: 2019 student project on wildfires and workers.
11. Explain how globalization affects global burdens of disease	ENV H 501: Foundations of Environmental and Occupational Health	<u>Didactic Opportunity</u> : Section 17. Reading: Lancet Planetary Health Report. <u>Assessment Opportunity</u> : Final. Questions about globalization and urbanization on global burden of disease.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	ENV H 501: Foundations of Environmental and Occupational Health ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants	ENV H 501 <u>Didactic Opportunity</u> : Session 2. Didactic lecture on EOH approach, including One Health systems model. <u>Assessment Opportunity</u> : Week 4. Graded concept map 1: Yakima ground water, students need to consider human, animal, and environmental aspects.

Content Coverage for Academic Doctoral Degree		Epidemiology: Doctor of Philosophy
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 5. Complete online training from the North Carolina Institute for Public Health (NCIPH) titled, "Values and Beliefs Inherent to a Public Health Perspective." <u>Assessment Opportunity</u> : Complete online post-training test and submit certificate of completion.
2. Identify the core functions of public health and the 10 Essential Services*	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 5. Watch online lecture from the Centers for Disease Control titled "Introduction to Public Health" by Susie McCarthy on fundamental functions of public health and ten essential public health services. □ <u>Assessment Opportunity</u> : Week 5. In an individual homework assignment, identify 2 of the 10 essential services of public health agencies and describe how they influenced your life. If you do not think you have encountered the real-world application of these 10 essential services, describe 2 situations where you think they should have been present but were not.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ^a
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	EPI 512: Epidemiologic Methods I EPI 583: Epidemiology Seminar	<p>EPI 512: quantitative <u>Didactic Opportunity:</u> Week 1. A lecture and a textbook chapter reading cover the concept of "Diseases and Populations" and quantitative thinking in population health sciences. The critical importance of quantitative approaches to generate evidence, describe the burden of a health problem, and identify its determinants at the population level are discussed. In addition, the contribution of quantitative evidence to the development of prevention strategies and intervention programs is emphasized and highlighted via real-world examples. □ <u>Assessment Opportunity:</u> Week 1. A problem set assignment (problem set for week 1) requires students to demonstrate their understanding of the role of quantitative methods and epidemiologic thinking in assessing population health. For example, a question in this problem set encourages students to think how an epidemiologic study of a condition often begins by trying to identify all cases that occur in a defined population at risk and asks them to identify the corresponding defined population at risk for epidemiologic purposes for cases of certain diseases. These questions are assessed individually. □ EPI 583: qualitative <u>Didactic Opportunity:</u> Week 2. Lecture on qualitative methods research and its application entitled "Bullying and Quality of life in youths perceived as gay, lesbian, or bisexual in Washington State;" Watch the online Yale Global Health Leadership Institute's lecture series on "Fundamentals of Qualitative Research Methods" Module 1 (What is qualitative research?), Module 2 (Developing a qualitative research question), Module 5 (Data analysis), and Module 6 (Scientific rigor). □ <u>Assessment Opportunity:</u> Week 2. In an individual homework assignment, students prepare an essay response discussing the need for qualitative data collection methods, how these data provide value beyond what might have been possible in the context of quantitative data collection. They also describe one complexity of qualitative vs. quantitative data collection; After watching the Yale Global Health Leadership Institute's lecture series on qualitative research methods, students complete a quiz.</p>
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	EPI 512: Epidemiologic Methods I	<p><u>Didactic Opportunity:</u> Week 3. A lecture titled "Study Design [1]" and a textbook chapter reading cover the concept of "Person, Place, and Time." During the lecture, the students learn about the leading causes of mortality and morbidity in the US using several sources of information such the Global Burden of Disease, National Center for Health Statistics, published articles, and media (e.g., How American Die? https://www.bloomberg.com/graphics/dataview/how-americans-die). □ <u>Assessment Opportunity:</u> Week 3. A discussion question assignment (discussion question for week 3) requires students to individually think how cancer has been changing as a leading cause of death in the US and explain the concepts of mortality rate and proportional mortality in relation to that disease. Students then discuss their answer within small group sessions led by faculty and teaching assistants. During the lecture, PollEverywhere is used to assess students' knowledge on the leading causes of morbidity and mortality in the U.S.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 4. Lecture on "Cohort studies of the efficacy of screening for cancer," reading "Applying epidemiologic concepts of primary, secondary, and tertiary prevention to the elimination of racial disparities in asthma" by Joseph et al. 2006. <u>Assessment Opportunity</u> : Week 4. In an individual homework assignment, students prepare an essay response discussing the difference between primary, secondary, and tertiary prevention using cancer as an example. They also discuss the role of disease screening and surveillance, including costs of false positive and false negative screening tests. Students complete a quiz based on the Joseph et al. 2006 article.
6. Explain the critical importance of evidence in advancing public health knowledge	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 10. Lecture on "Landmarks in public health history and their continued significance." <u>Assessment Opportunity</u> : Week 10. In an individual homework assignment, students explain the critical importance of vaccines, and, the role of vaccine hesitancy as factors that influence current vaccination policies and the need for disease surveillance.
7. Explain effects of environmental factors on a population's health	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 5. Lecture on "Addressing environmental determinants of child health, in your backyard and in our nation," readings: Cardiovascular Disease: An Update to the Scientific Statement From the American Heart Association; and The Toll of Coal: Health Impacts of Coal Export in the Northwest. □ <u>Assessment Opportunity</u> : Week 5. In an individual homework assignment, students prepare an essay response explaining why children are especially vulnerable to the health effects of air pollution exposure, including at least one relevant example as to a likely contributor to air pollution in their community. Students discuss how one might use biological and epidemiologic evidence to enact change in public health policies surrounding this contributor to air pollution.
8. Explain biological and genetic factors that affect a population's health	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 6. Lecture on "Whose genomes matter." Reading: "Genetics in public health: rarely explored" by Aswini and Varun 2010. <u>Assessment Opportunity</u> : Week 6. In an individual homework assignment, students explain ways in which integrating genetics into public health departments can help these agencies to better provide the 10 essential services with regard to biological risk factors and outcomes. Students prepare an essay explaining implications of excluding minority populations from population genetics research.
9. Explain behavioral and psychological factors that affect a population's health	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity</u> : Week 7. Lecture on "Associations between depression and marijuana use and misuse during adolescence." <u>Assessment Opportunity</u> : Week 7. In an individual homework assignment, students explain the connection between mental health and drug abuse disorders using the relationship between marijuana use patterns and depression as an example.

Content	Course number(s) and name(s)	Describe specific assessment opportunity"
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity:</u> Week 8. Lecture on "From payday loans to pawnshops: fringe banking, the unbanked, and health;" Reading: Psychiatric, psychological, and social determinants of health in the Nurses' Health Study cohorts. Trudel-Fitzgerald et al. 2016. <u>Assessment Opportunity:</u> Week 8. In an individual homework assignment, students explain (and provide specific examples) the implications of the growth of the fringe banking industry on social welfare programs and health outcomes. Students explain how two different factors (among social, political, economic, or behavioral) contribute to, or are related to, individual mental health outcomes, such as depression.
11. Explain how globalization affects global burdens of disease	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity:</u> Week 3. Lecture on "Global burden of disease, injuries, risk factors, current status and potential changes in the face of globalization;" Reading: "The health impacts of globalisation: a conceptual framework" by Huynen et al. 2005. <u>Assessment Opportunity:</u> Week 3. In an individual homework assignment, students explain how patterns of globalization may influence the relevance of health risk factors to individual and population health.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	EPI 583: Epidemiology Seminar	<u>Didactic Opportunity:</u> Week 9. Lecture on "One Health integrated surveillance of antimicrobial resistance in humans, animals, and environments" and watch an online lecture by Peter Rabinowitz entitled, "The One Health approach to public health challenges in the Pacific Northwest."□ <u>Assessment Opportunity:</u> Week 9. In an individual homework assignment, students explain how animals might serve as sentinels of environmental health hazard, and provide an example of a microbe that is "shared" between animals and humans.

Content Coverage for Academic Doctoral Degree		
Global Health, Metrics and Implementation Science: Doctor of Philosophy Global Health, Pathobiology: Doctor of Philosophy		
Content	Course number(s) and name(s)	Describe specific assessment opportunity"
1. Explain public health history, philosophy and values	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 1. Lecture on the U.S. Public Health: Past, Present, and Future. Required Reading: Lee LM, Zarowsky C. Foundational values for public health. Public Health Rev. 2015;36:2; and the Centers for Disease Control and Prevention (CDC). Presentation: Introduction to Public Health. In: Public Health 101 Series. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2014, https://www.cdc.gov/publichealth101/public-health.html . <u>Assessment Opportunity:</u> Week 1. Quiz: Students answer 10 knowledge check questions embedded in CDC's Introduction to Public Health Presentation.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Identify the core functions of public health and the 10 Essential Services*	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 1. Lecture on the U.S. Public Health: Past, Present, and Future. Week 2. Required Reading/Viewing: 1. The 10 Essential Public Health Services: An Overview, CDC Presentation, https://www.cdc.gov/publichealthgateway/publichealthservices/pdf/essential-phs.pdf ; 2. Ten Essential Public Health Services and How They Can Include Addressing Social Determinants of Health Inequities, CDC Presentation, https://www.cdc.gov/publichealthgateway/publichealthservices/pdf/Ten_Essential_Services_and_SDOH.pdf . <u>Assessment Opportunity:</u> Week 2. Quiz: Students are required to complete a ten-question quiz on the core public health functions and 10 essential services.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 3. Required Readings: 1. Wolff B, Mahoney F, Lohiniva AL, Corkum M. Collecting and Analyzing Qualitative Data. The CDC field epidemiology manual. 2019:213-28, https://www.cdc.gov/eis/field-epi-manual/chapters/Qualitative-Data.html . 2. Moffatt S, White M, Mackintosh J, Howel D. Using quantitative and qualitative data in health services research, what happens when mixed method findings conflict? ISRCTN61522618. BMC Health Serv Res. 2006;6:28. <u>Assessment Opportunity:</u> Week 3. Assignment: Students submit individual written report with the following prompts: 1. Distinguish between qualitative and quantitative methods for defining and measuring population's health; 2. Explain the strengths and weaknesses of qualitative and quantitative methods.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 2, 3, 5, 6, 7. Lectures on Global Burden of Disease (week 2), Global Mental Health (week 3), Diseases in War, Natural Disasters, and Complex Emergencies (week 5), Antimicrobial Resistance Crisis (week 6), Cardiovascular Diseases (week 7). Week 4. Required Readings: 1. U.S. Burden of Disease Collaborators, Mokdad AH, Ballesteros K, et al. The State of U.S. Health, 1990-2016: Burden of Diseases, Injuries, and Risk Factors Among US States. JAMA. 2018;319(14):1444-1472. 2. Mortality in the United States, 2018; NCHS Data Brief No. 355, January 2020 3. Jiaquan Xu, Sherry L. Murphy, Kenneth D. Kochanek, and Elizabeth Arias 4. https://www.cdc.gov/nchs/products/databriefs/db355.htm . <u>Assessment Opportunity:</u> Week 4. Quiz: Students complete a ten-question quiz on the major causes and trends of morbidity and mortality in the US and in Seattle, WA.
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 1, 8, 9. Lecture on the U.S. Public Health: Past, Present, and Future (week 1), Vaccine Preventable Diseases and Immunization Coverage (week 8), Global Health of Women, Adolescents, and Children (week 9). Week 5. Required Readings: Ali A, Katz DL. Disease Prevention and Health Promotion: How Integrative Medicine Fits. Am J Prev Med. 2015;49(5 Suppl 3):S230-S240. Salazar LF, Crosby RA, DiClemente R. Health behavior in the context of the "new" Public Health. Health Behav Theory Public Health. 2013;3:26. <u>Assessment Opportunity:</u> Week 5. In-class group discussion: In a breakout session, groups of 2-3 students discuss and submit individual written report with the following prompts, 1. categorize different public health interventions as primary, secondary, or tertiary prevention; 2. justify the prevention level of the different interventions.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
6. Explain the critical importance of evidence in advancing public health knowledge	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 1, 2, 6, 7, 8, 9. Lectures on the U.S. Public Health: Past, Present, and Future (week 1), Global Burden of Disease (week 2), Global Antimicrobial Resistance Crisis (week 6), Cardiovascular Diseases (week 7), Vaccine Preventable Diseases and Immunization Coverage (week 8), Global Health of Women, Adolescents, and Children (week 9). Week 6. Required Reading: Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: a fundamental concept for public health practice. <i>Annu Rev Public Health</i> . 2009;30:175-201. □ <u>Assessment Opportunity:</u> Week 6. Class discussion, Quiz: In-depth discussion of the assigned readings. Students answer quiz questions on the significance of evidence-based decision making in public health and infectious disease surveillance in the U.S.□
7. Explain effects of environmental factors on a population's health	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 7. CDC Grand Rounds: Tracking Environmental Health Data for Public Health Decision Making and Required Reading: Patz JA, Campbell-Lendrum D, Holloway T, Foley JA. Impact of regional climate change on human health. <i>Nature</i> . 2005;438(7066):310-317. □ <u>Assessment Opportunity:</u> Week 7. In-depth class discussion of CDC Grand Rounds and assigned reading. Students answer quiz questions on the effects of environmental factors on population's health.
8. Explain biological and genetic factors that affect a population's health	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 7, 9. Lectures on Cardiovascular Diseases (week 7), Global Health of Women, Adolescents, and Children (week 9). Week 8. Required Reading: Qasim A, Turcotte M, de Souza RJ, et al. On the origin of obesity: identifying the biological, environmental and cultural drivers of genetic risk among human populations. <i>Obes Rev</i> . 2018;19(2):121-149.□ <u>Assessment Opportunity:</u> Week 8. Students answer quiz questions on the effects of various biological and genetic factors on population's health.□
9. Explain behavioral and psychological factors that affect a population's health	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Weeks 3, 4. Lectures on Global Mental Health (Week 3), Global Health Landscape (week 4). Week 9. Required Readings: 1. Understanding Population Health and Its Determinants, In: Boufford JI, Cassel CK, Bender KW. The future of the public's health in the 21st century. Washington: Institute of Medicine of the National Academies. 2002, Chapter 2. 2) Rokach A. Health, Illness, and the Psychological Factors Affecting Them. <i>J Psychol</i> . 2019;153(1):1-5. □ <u>Assessment Opportunity:</u> Week 9. Class discussion and quiz on the behavioral and psychological factors associated with diverse health outcomes.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity:</u> Week 3, 4. Lectures on Global Mental Health (week 3), Global Health Landscape (week 4). Week 9. Required Readings: 1. Understanding Population Health and Its Determinants, In: Boufford JI, Cassel CK, Bender KW. The future of the public's health in the 21st century. Washington: Institute of Medicine of the National Academies. 2002, Chapter 2. 2. Woolf SH, Braveman P. Where health disparities begin: the role of social and economic determinants, and why current policies may make matters worse. <i>Health Aff (Millwood)</i> . 2011;30(10):1852-1859.□ <u>Assessment Opportunity:</u> Week 9. Class discussion and quiz on the impact of social, political, and economic determinants of health on health inequities and disparities.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
11. Explain how globalization affects global burdens of disease	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity</u> : Week 2. Lecture on Global Burden of Disease. Week 10. Required Readings: Suk JE, Van Cangh T, Beauté J, et al. The interconnected and cross-border nature of risks posed by infectious diseases Glob Health Action. 2014;7:25287. Gushulak BD, MacPherson DW. Globalization of infectious diseases: the impact of migration. Clin Infect Dis. 2004;38(12):1742-1748. <u>Assessment Opportunity</u> : Week 10. Class discussion and quiz questions on the factors associated with global, cross-border dissemination of infectious diseases, including viruses and antimicrobial-resistant bacteria.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	PABIO 550: Diseases and Issues in Global Health	<u>Didactic Opportunity</u> : Week 10. Lecture on One Health. Required Reading: Rabinowitz P, Conti L. Links among human health, animal health, and ecosystem health. Annu Rev Public Health. 2013;34:189-204. <u>Assessment Opportunity</u> : Week 10. Assignment (written report): Student submit a report on a recent zoonotic infection, including the agent, host(s), mechanism of transmission, effect on humans, extent of the outbreak, control measures, etc.

Content Coverage for Academic Doctoral Degree		Health Services: Doctor of Philosophy
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	HSERV 514: Social Determinants of Population Health and Health Disparities	<u>Didactic Opportunity</u> : Session 2. Reading material (e.g., Keyes K and Galea S. Population Health Science. Oxford University Press, New York, NY. 2016. Chapter 1: "An Introduction to Population Health Science" and Chapter 2 "Conceptualizing and evaluating Causes for Population Health Science", Healthy People 2020, and CDC core public health functions). Related discussion questions are shared with students during the class period and a write-pair-share strategy is used such that students answer the questions by themselves, then share their answer with peers, then discuss in the full class led by the instructor. <u>Assessment Opportunity</u> : Session 2. Students post on the course discussion board answers to the following question: How does the public health history, philosophy, and values inform population health and population health science? Discussion board responses are graded.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
2. Identify the core functions of public health and the 10 Essential Services*	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Session 3. Reading material covering core functions of public health and the 10 essential services (Center for Disease Control and Prevention 10 Essential Public Health Services; https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html) with paired discussion questions and write-pair-share activities.</p> <p><u>Assessment Opportunity:</u> Session 9. Students post on the course discussion board answers to the following question: In a previous session, we identify the core functions of public health and the 10 Essentials Services and how they may be embedded on conceptual models to explain health and health disparities. Discuss here how core functions of public health and the 10 Essentials Services may be critical to improve population health, develop and implement policies and interventions. Discussion board responses are graded.</p>
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	HSERV 522: Health Program Evaluation	<p><u>Didactic Opportunity:</u> Week 4. Lecture and in-class activity about the positivism-interpretivism continuum, the complementary role of qualitative, quantitative, and mixed methods approaches in evaluation, and common data sources for each. Reading: "Chapter 6: Evaluation of Program Implementation: Quantitative and Qualitative Methods, Multiple and Mixed Methods Designs" in The Practice of Health Program Evaluation by David Grembowski. □</p> <p><u>Assessment Opportunity:</u> Evaluation critique paper due week 7. Students are given a short list of published impact evaluations and asked to choose one to read, summarize both the framework used (or lack thereof) in developing the evaluation and the quantitative and/or qualitative approaches used to collect and interpret data to describe and assess the impact of a program or intervention on a population's health, and discuss how other choices in these domains might have improved the validity and usefulness of the evaluation findings.</p>
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Reading Session 2, National Center for Health Statistics: Health, United States, 2016: With Chartbook on Long-term Trends in Health. Hyattsville, MD. 2017. Available at: https://www.ncbi.nlm.nih.gov/books/NBK453378/pdf/Bookshelf_NBK453378.pdf and Braveman P, Egerter S, Williams DR. The social determinants of health: coming of age. Annual Review of Public Health. 2011;32:381-98 with paired discussion questions and related write-pair-share exercises where instructor uses examples of major causes and trends of morbidity and mortality in the U.S. to drive discussion.</p> <p><u>Assessment Opportunity:</u> Session 2. Students post on the course discussion board answers to the following question: List major causes and trends of morbidity and mortality in the U.S. and link them to population health and health disparities. What populations and communities are most affected by the major causes and trends of morbidity and mortality in the U.S.? Give an example. Discussion board responses are graded.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ^a
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSERV 592: Program Seminars (Health Research Training)	<u>Didactic Opportunity:</u> Session 1. Review of core competency: the Science and Application of Prevention in Public Health; Mandatory reading: Alexander et al Chapter 3 in New Dimensions in Women's Health. Jones and Bartlett. 2017: 51 - 89 and Joseph et al, J Allergy Clin Immunol. 2006 ; 117(2): 233–242. □ <u>Assessment Opportunity:</u> Written response to discussion questions asking students to discuss the science of primary, secondary, and tertiary prevention in population health, including defining health promotion and discussing contexts in which screening is justified.
6. Explain the critical importance of evidence in advancing public health knowledge	HSERV 513: Health Policy Research HSERV 514: Social Determinants of Population Health and Health Disparities	<u>Didactic Opportunity:</u> Weeks 8-10. Readings and discussion: Craig P, Katikireddi SV, Leyland A, Popham F. Natural Experiments: An Overview of Methods, Approaches, and Contributions to Public Health Intervention Research. Annu Rev Public Health. 2017 Mar 20;38:39-56. ; Allen ST, Ruiz MS, O'Rourke A. The evidence does not speak for itself: The role of research evidence in shaping policy change for the implementation of publicly funded syringe exchange programs in three U.S. cities.; Brownson RC, Fielding JE, Green LW. Building Capacity for Evidence-Based Public Health: Reconciling the Pulls of Practice and the Push of Research. Annu Rev Public Health. 2017 Nov 20. <u>Assessment Opportunity:</u> Essay 3. Essay that assesses the relative strengths and weaknesses of different study designs for a specific health policy challenge, including the critical role of evidence in advancing public health knowledge.
7. Explain effects of environmental factors on a population's health	HSERV 514: Social Determinants of Population Health and Health Disparities	<u>Didactic Opportunity:</u> Readings, sessions 4, 6, 8 (Evans RG, Stoddart GL. Producing health, consuming health care. Soc Sci Med. 1990;31(12):1347-63; Gkiouleka A, Huijts T, Beckfield J, Bambra C. Understanding the micro and macro politics of health: Inequalities, intersectionality & institutions—A research agenda. Soc Sci Medicine. 2018;200:92-98; Keyes K and Galea S. Population Health Science. Oxford University Press, New York, NY. 2016. Chapter 5: "Ubiquity and the Macrosocial Determinants of Health" (pages 67-98); and Diez Roux AV, Mair C. Neighborhoods and health. Ann N Y Acad Sci. 2010;1186:125-45) with linked discussion questions and write-pair-share exercises. <u>Assessment Opportunity:</u> Parts 2 and 3 of the "social determinants project" requires students to present a conceptual model in both pictorial and text form that depicts an association between a social determinant and a specific health outcome and is inclusive of all environmental, social, political, economic, behavioral and psychological, and biological/genetic determinants that may influence their association of interest.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Readings, sessions 2, 3, 4, 5 (Keyes K and Galea S. Population Health Science. Oxford University Press, New York, NY. 2016. Chapter 2 "Conceptualizing and evaluating Causes for Population Health Science," and Chapter 4: "Population Health Across Levels, Systems, and the Life Course;" Braveman P, Egerter S, Williams DR. The social determinants of health: coming of age. Annual Review of Public Health. 2011;32:381-9; Evans RG, Stoddart GL. Producing health, consuming health care. Soc Sci Med. 1990;31(12):1347-63; Dressler WW, Oths KS, Gravlee CC. Race and ethnicity in public health research: models to explain health disparities. Annu Rev Anthropol. 2005;34:231-52. and Krieger N. Genders, sexes, and health: what are the connections—and why does it matter? Int J Epidemiology. 2003; 32:652-657.) with linked discussion questions and write-pair-share exercises.</p> <p><u>Assessment Opportunity:</u> Parts 2 and 3 of the "social determinants project" requires students to present a conceptual model in both pictorial and text form that depicts an association between a social determinant and a specific health outcome and is inclusive of all environmental, social, political, economic, behavioral and psychological, and biological/genetic determinants that may influence their association of interest.</p>
9. Explain behavioral and psychological factors that affect a population's health	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Readings, sessions 2, 3, 4, 5 and 6 (Keyes K and Galea S. Population Health Science. Oxford University Press, New York, NY. 2016. Chapter 2 "Conceptualizing and evaluating Causes for Population Health Science" and Chapter 4: "Population Health Across Levels, Systems, and the Life Course" ; Braveman P, Egerter S, Williams DR. The social determinants of health: coming of age. Annual Review of Public Health. 2011;32:381-9; Evans RG, Stoddart GL. Producing health, consuming health care. Soc Sci Med. 1990;31(12):1347-63; Dressler WW, Oths KS, Gravlee CC. Race and ethnicity in public health research: models to explain health disparities. Annu Rev Anthropol. 2005;34:231-52; Myers HF. Ethnicity- and socio-economic status-related stresses in context: an integrative review and conceptual model. J Behav Med. 2009; 32:9-19; 2. Umberson D, Montez JK. Social Relationships and Health: A Flashpoint for Health Policy. J Health and Social Behavior. 2010;51:S54-S65.) with linked discussion questions and write-pair-share exercises.</p> <p><u>Assessment Opportunity:</u> Parts 2 and 3 of the "social determinants project" requires students to present a conceptual model in both pictorial and text form that depicts an association between a social determinant and a specific health outcome and is inclusive of all environmental, social, political, economic, behavioral and psychological, and biological/genetic determinants that may influence their association of interest.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	HSERV 514: Social Determinants of Population Health and Health Disparities	<p><u>Didactic Opportunity:</u> Readings, sessions 2, 5, 8 (Keyes K and Galea S. Population Health Science. Oxford University Press, New York, NY. 2016. Chapter 2 "Conceptualizing and evaluating Causes for Population Health Science," and Chapter 5: "Ubiquity and the Macrosocial Determinants of Health;" Braveman P, Egerter S, Williams DR. The social determinants of health: coming of age. Annual Review of Public Health. 2011;32:381-9; Krieger N. "Chapter 3: Discrimination and Health Inequities." In: Social Epidemiology; Edited by Lisa F. Berkman, Ichiro Kawachi, and M. Maria Glymour. Oxford University Press, New York, NY, 2014.; Hatzenbuehler ML, Bellatorre A, Lee Y, Finch BK, Muennig P, Fiscella K. Structural stigma and all-cause mortality in sexual minority populations. Soc Sci Medicine. 2014;103:33-41.; Gkiouleka A, Huijts T, Beckfield J, Bambra C. Understanding the micro and macro politics of health: Inequalities, intersectionality & institutions—A research agenda. Soc Sci Medicine. 2018;200:92-98; Robert SA. Socioeconomic position and health: the independent contribution of community socioeconomic context. Annual Review of Sociology. 1999;25:489-516. .) with linked discussion questions and write-pair-share exercises.</p> <p><u>Assessment Opportunity:</u> Parts 2 and 3 of the "social determinants project" requires students to present a conceptual model in both pictorial and text form that depicts an association between a social determinant and a specific health outcome and is inclusive of all environmental, social, political, economic, behavioral and psychological, and biological/genetic determinants that may influence their association of interest.</p>
11. Explain how globalization affects global burdens of disease	HSERV 592: Program Seminars (Health Research Training)	<p><u>Didactic Opportunity:</u> Session 7. Review of core competency: Explain how globalization affects global burdens of disease with mandatory reading: Huynen et al, Globalization and Health, 2005.</p> <p><u>Assessment Opportunity:</u> Written response to discussion questions asking students to explain how globalization affects global burdens of disease.</p>
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HSERV 592: Program Seminars (Health Research Training)	<p><u>Didactic Opportunity:</u> Session 8. Explain an ecological perspective on the connections among human health, animal health, and the ecosystem with mandatory review of webinar http://www.nwcphp.org/docs/ht2015/20150714/htip20150714.html.</p> <p><u>Assessment Opportunity:</u> Written response to discussion questions asking students to explain how globalization affects global burdens of disease.</p>

Content Coverage for Academic Doctoral Degree		Nutritional Sciences: Doctor of Philosophy	
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Explain public health history, philosophy and values	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity</u>: Week 1. Students complete reading on the history and future of public health.</p> <p><u>Assessment Opportunity</u>: Week 1. Students complete in-class question sets to assess their understanding of public health history and public health frameworks for approaching health burdens.</p>	
2. Identify the core functions of public health and the 10 Essential Services*	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity</u>: Week 1. Readings for this week include coverage of the 10 essential services and core functions of public health.</p> <p><u>Assessment Opportunity</u>: Week 1. Students complete in-class question sets to reflect on the 10 essential services, including a question about the 10 essential services.</p>	
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	BIOST 511: Medical Biometry I NUTR 531: Public Health Nutrition	<p>BIOST 511: quantitative</p> <p><u>Didactic Opportunity</u>: Course textbook: Baldi, B and Moore DS (2013), The Practice of Statistics in the Life Sciences.</p> <p><u>Assessment Opportunity</u>: Explanation of quantitative methods to be used to describe and assess a population's health are part of the data analysis plan Part 1 submitted by each student for their Data Analysis Project.</p> <p>NUTR 531: qualitative</p> <p><u>Didactic Opportunity</u>: Week 1-2. Lab presentation to discuss how to conduct pragmatic qualitative research. Students review interview guides created by course instructors. Week 1-10. Lab Project. Students will observe practices, interview stakeholders, analyze interviews, and assess changes implementation in a community-based policy development project.</p> <p><u>Assessment Opportunity</u>: Week 10. The Lab Project. Students develop an individually assessed annotated bibliography related to the lab project topic. They also develop and submit an executive summary and a report for the community-based clients and other stakeholders. Additionally, they prepare and conduct a presentation for the client and other stakeholders. Student assessment includes the appropriate use and interpretation of the qualitative data collected. Each student has an individual role assignment in the group project and receives an individual and a group grade.</p>	
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity</u>: Week 1. Students prepare for in-class discussion by reading the following article: Murray CJL, Phil D, Lopez AD. Measuring the global burden of disease. NEJM 2013;369(5):448-457.</p> <p><u>Assessment Opportunity</u>: Week 1. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: "List what you consider to be the top 6-10 chronic conditions that contribute to mortality. For each condition, list the most frequent associated morbidities (at least two per condition). Discuss contributors to the occurrence of morbidity, or chronic disease, in an individual and a population. Develop a comprehensive, yet succinct, one sentence definition of chronic disease."</p>	

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity</u>: Week 1. Students prepare for in-class discussion by reading the following article: Starfield B, Hyde J, Gervas J, Heath I. The concept of prevention: A good idea gone astray? J Epid Comm Health 2008; 62: 580-583.</p> <p><u>Assessment Opportunity</u>: Week 1. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: Discuss the science of primary, secondary, and tertiary prevention of disease in population health. Based on the Starfield article, define the different levels of prevention. Reflect on the ways in which the Starfield article changed or expanded your understanding and/or ways of thinking about disease prevention and health promotion.</p>
6. Explain the critical importance of evidence in advancing public health knowledge	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity</u>: Week 4. Lecture on evaluating the scientific evidence.</p> <p><u>Assessment Opportunity</u>: Week 1, 2. Students complete critical article review questions. Week 10. Students write a paper about the scientific evidence around a public health nutrition issue that includes a critical evaluation of the scientific literature.</p>
7. Explain effects of environmental factors on a population's health	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity</u>: Week 2. Students read two articles to prepare for discussion of how environmental features, such as the built environment, including the food environment, as well as neighborhood environments (including deprivation and segregation) may influence health outcomes. Luckerson, Victor. How a City Fought Runaway Capitalism and Won: New York Times. Nov 15 2019. https://www.nytimes.com/2019/11/15/opinion/sunday/tulsa-dollar-stores.html. Richardson, Andrea S., et al. "Can the introduction of a full-service supermarket in a food desert improve residents' economic status and health?" Annals of Epidemiology 27.12 (2017): 771-776.</p> <p><u>Assessment Opportunity</u>: Week 2. The New York Times article is used as a launching point for an in-class discussion of how our food environment and neighborhood environment can influence health. Students then complete and submit an in-class question set on the Annals of Epidemiology paper, including the questions below which specifically ask students to explain the effects of the main exposure and other factors (environmental factors, including but not limited to the food environment) on population health. Subset of questions from question set: 3. What is the main outcome of interest? 4. How is the outcome measured? 5. What is the main exposure of interest? 6. What other factors did the authors control for in the analyses? What does this mean in your own words?</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Weeks 2-10. Students prepare for each in-class discussion by reading articles and textbook chapters that include the biological, pathophysiological, psychological, behavioral, metabolic, and genetic factors that relate to specific chronic diseases and health in the population. For example, students prepare for a week 6 in-class discussion on diabetes by reading: Zaccardi F, Webb DR, Yates T, Davies MJ. Patho-physiology of type 1 and type 2 diabetes mellitus. A 90-year perspective. Postgrad Med J 2016.</p> <p><u>Assessment Opportunity:</u> Clinical Fact Sheets due Week 5 (set 1) and Week 10 (set 2). Students collaborate in pairs, but individually prepare and submit an evidence-based clinical fact sheet for an assigned chronic disease. Each clinical fact sheet contains the following information about the disease state assigned: classification and/or definition; assessment/screening tools and concerns; diagnostic criteria and procedures; treatment modalities (medical nutrition therapy; pharmacological management); genetic underpinnings to consider (e.g., autoimmune disease, specific common mutations); clinical and or educational goals; complications and common comorbidities; anything else that might be helpful (e.g., relevant calculations); references.</p>
9. Explain behavioral and psychological factors that affect a population's health	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Weeks 2-10. Students prepare for each in-class discussion by reading articles and textbook chapters that include the biological, pathophysiological, psychological, behavioral, metabolic, and genetic factors that relate to specific chronic diseases and health in the population. For example, students prepare for a week 4 in-class discussion on obesity as a disease by reading: Upadhyay J, et al. Obesity as a disease. Med Clin N Am 2018; 102: 13-33.</p> <p><u>Assessment Opportunity:</u> Week 4. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: what are some of the behavioral and psychological factors associated with classifying obesity as a disease?</p>
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity:</u> Week 2. Students read two papers on social, political, and economic determinants of health.</p> <p><u>Assessment Opportunity:</u> Week 2. Students discuss one of the two papers in-depth in a group. Students prepare and deliver a presentation of one paper to the rest of the class and answer questions from classmates. Students are assessed individually for the contribution to the group discussion and presentation explaining the social, political, and economic determinants of health and how they contribute to population health and health inequities.</p>
11. Explain how globalization affects global burdens of disease	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Week 1. Students prepare for in-class discussion by reading: Murray CJL, Phil D, Lopez AD. Measuring the global burden of disease. NEJM 2013; 369(5): 448-457 (https://www.nejm.org/doi/pdf/10.1056/NEJMra1201534).</p> <p><u>Assessment Opportunity:</u> Week 1. Students facilitate small group discussions in class, and individually submit written responses to several prompts for assessment, for example: what are the positive and negative effects of globalization with respect to chronic disease? Discuss whether the three global drivers of transitions in global health identified in the assigned paper apply to changes in the U.S.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context	<u>Didactic Opportunity</u> : Weeks 1-10. In order to introduce and assess the ecological perspective on the connections among human health, animal health, and ecosystem health; students read books and readings weeks 1-10 in preparation for class. <u>Assessment Opportunity</u> : Weeks 2-10. Every student has the opportunity to facilitate discussions in teams, and submit pre- and post-discussion reflections analyzing key intersections among human, animal, and ecosystem health influencing food systems components and determinants in the U.S. Instructor assesses each team facilitation and provides feedback to individual students based on a moderation assessment rubric that is given to students at the outset of the class. Instructor assesses each individual's pre- and post-reflections and provides feedback to individual students based on a reflection assessment rubric that is given to students at the outset of the class.

Content Coverage for Academic Doctoral Degree		Public Health Genetics: Doctor of Philosophy
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture drawn from CDC material. <u>Assessment Opportunity</u> : Week 10. Students write a term paper, synthesizing how public health foundations relate to a chosen health condition (a major cause of morbidity/mortality) and how an understanding of the foundations of public health will impact the student's work as a biostatistician.
2. Identify the core functions of public health and the 10 Essential Services*	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 1. Lecture on core functions, week 3. Lecture and video on 10 essential services. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material which introduces and applies the core functions of public health and the 10 Essential Services. (Pre-Quiz 2 Q1-6, Post-Quiz 2 Q1-2)
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Video and article on quantitative vs qualitative methods and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the role of quantitative and qualitative studies. (Pre-Quiz 3 Q1-5, Post-Quiz 3 Q1-3)
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 2. Video and readings on causes of mortality and lecture. <u>Assessment Opportunity</u> : Week 2. Students complete two quizzes with questions relating to assigned material on major causes and trends of morbidity and mortality in the US and China. (Pre-Quiz 1, Post-Quiz 1)
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 3. Lecture on primary, secondary, and tertiary prevention in population health. <u>Assessment Opportunity</u> : Week 3. Students complete two quizzes with questions relating to assigned material on primary, secondary, and tertiary prevention. (Pre-Quiz 2 Q7-10, Post-Quiz 2 Q3-5)

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
6. Explain the critical importance of evidence in advancing public health knowledge	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 4. Article on the importance of evidence and discussion. <u>Assessment Opportunity</u> : Week 4. Students complete two quizzes with questions relating to assigned material on the importance of evidence in advancing public health knowledge. (Pre-Quiz 3 Q6-10, Post-Quiz 3 Q4-5)
7. Explain effects of environmental factors on a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Videos and reading on air pollution and on environmental influences on health and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on effects of environmental factors on a population's health. (re-Quiz 4 Q1-5, Post-Quiz 4 Q1-2)
8. Explain biological and genetic factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 5. Video on genetic and environmental influences on health, readings on biological and genetic factors and discussion. <u>Assessment Opportunity</u> : Week 5. Students complete two quizzes with questions relating to assigned material on biological and genetic factors that affect a population's health. (Pre-Quiz 4 Q6-10, Post-Quiz 4 Q3-5)
9. Explain behavioral and psychological factors that affect a population's health	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Videos on physical activity and cardiovascular health. and social determinants of health; lecture and discussion. <u>Assessment Opportunity</u> : Week 8. Students complete two quizzes with questions relating to assigned material on behavioral and psychological factors that affect a population's health. (Pre-Quiz 6 Q1-5, Post-Quiz 6 Q1-2)
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 8. Readings on health and income inequality and discussion. <u>Assessment Opportunity</u> : Week 6. Students complete two quizzes with questions relating to assigned material on social, political, and economic determinants of health, and how they contribute to population health and health inequities. (Pre-Quiz 6 Q6-10, Post-Quiz 6 Q3-5)
11. Explain how globalization affects global burdens of disease	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Reading on globalization and health and lecture. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on how globalization affects global burdens of disease. (Pre-Quiz 7 Q1-5, Post-Quiz 7 Q1-2)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	BIOST 504: Foundations of Public Health for Biostatistics	<u>Didactic Opportunity</u> : Week 9. Readings on One Health and planetary health. <u>Assessment Opportunity</u> : Week 9, 10. Students complete two quizzes with questions relating to assigned material on the connections among human health, animal health, and ecosystem health. (Pre-Quiz 7 Q6-10, Post-Quiz 7 Q3-5)

- 3) Provide a matrix, in the format of Template D18-2, that lists competencies for each relevant degree and concentration. The matrix indicates at least one assessment activity for each of the listed competencies. Typically, the school will present a separate matrix for each concentration. Note: these competencies are defined by the school and are distinct from the introductory public health learning objectives defined in this criterion.

Assessment of Competencies for Doctoral Degree		
Biostatistics: Doctor of Philosophy		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Recommend and defend appropriate choices of methods to analyze longitudinal, clustered, and other non-independent outcome data.	BIOST 571: Advanced Regression Methods for Dependent Data	<u>Didactic Opportunity</u> : Week 9, 10. Chapter 5 lecture notes describing the strengths/weaknesses and differences between conditional and marginal regression models for analyzing correlated binary data. <u>Assessment Opportunity</u> : Week 10. Students are asked to analyze the relationship between fluoride intake and age using longitudinal (clustered, correlated) data from an observational study of children. They are asked to conduct this analysis using three different regression approaches that account for correlation and to recommend which approach is most appropriate given the scientific aims of the analysis. The instructor will assess the appropriateness of the student's recommendation and how successfully they defend and explain their recommendation.
2. Evaluate an area of biostatistical methodology, and propose and develop new methodology in that area.	BIOST 800: Doctoral Dissertation	<u>Didactic Opportunity</u> : Weeks 1-10. Students meet regularly with one or more faculty advisors to discuss, plan, undertake, and evaluate their research. Faculty guide the research, providing instruction on not only the research topic at hand, but also the process of biostatistics research and how it can be done most effectively. <u>Assessment Opportunity</u> : Week 1-10. Students survey the statistical methodology literature in the proposed area of their dissertation research and propose work they intend to perform in their dissertation in a "Short Proposal," explaining how it will add to the current literature. These proposals are reviewed by the full departmental faculty, who comment on the appropriateness of the scale, approach and topic of the dissertation topic. A degree of standardization of assessment is achieved in this way.
3. Explain both orally and in writing how advanced statistical methods work, assessing their strengths and limitations, and the place of particular methods in the larger statistical literature.	BIOST 572: Advanced Regression Methods: Project	<u>Didactic Opportunity</u> : Week 3. Guideline on Effective Presentation. Weeks 4, 5: Guideline on scientific writing and editing. <u>Assessment Opportunity</u> : Week 10. Final report and final oral presentation. Given recent publications in statistical methodology, students are asked to develop and deliver presentations that explain the methodology to general audience and experts in the field respectively, to reproduce numerical and main theoretical results, and to provide a critical evaluation of the methodology in a final report. Students are evaluated on their explanations of the advanced statistical methods relevant to their project, their strengths and limitations, and the place of their particular methods in the larger scientific literature.

Assessment of Competencies for Doctoral Degree		Statistical Genetics: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Estimate allele frequencies and variance of the estimates from genotype count data; perform a hypothesis test for differences in allele frequencies. □	BIOST 550: Statistical Genetics I: Mendelian Traits	<u>Didactic Opportunity</u> : Week 3. Lectures on estimating allele frequencies (includes variances) and on testing for difference in allele frequencies. □ <u>Assessment Opportunity</u> : Week 3. The student is given genotype counts for samples of individuals from each of two populations and asked to test whether the genotype frequency differs between the two populations (HW2).
2. Calculate conditional probabilities of genotypes for individuals given the genotypes of specific relatives. Calculate disease risk for a Mendelian disease for a known disease model, from the individual's genotype or from information about genotypes of relatives.	BIOST 550: Statistical Genetics I: Mendelian Traits	<u>Didactic Opportunity</u> : Week 6. Lecture on calculating conditional probability of an individual's genotype given the genotype of their relative. □ <u>Assessment Opportunity</u> : Week 6. The student is asked to calculate the probability that an individual has a certain recessive disease conditional on knowing that the individual's uncle has the disease (HW4).
3. Estimate kinship and inbreeding coefficients using pedigree relationships.	BIOST 550: Statistical Genetics I: Mendelian Traits	<u>Didactic Opportunity</u> : Week 5. Lecture on calculating kinship coefficients. □ <u>Assessment Opportunity</u> : Week 5. The student is asked to calculate the kinship coefficient for a pair of cousins whose grandmother is the child of second-cousins (HW3).
4. Estimate kinship and inbreeding coefficients in the absence of pedigree information using population-level SNP data.	BIOST 551: Statistical Genetics II: Quantitative Traits	<u>Didactic Opportunity</u> : Week 4. Lecture on estimating kinship and inbreeding coefficients, using genetic marker data, in the absence of pedigree information. Based on published article "A unified characterization of population structure and relatedness." Weir and Goudet, Genetics 206:2085-2103, 2017. □ <u>Assessment Opportunity</u> : Each student is asked to write R code to estimate kinship and inbreeding coefficients from bi-allelic genetic marker data. They will each apply their code to data for one of the 22 autosomal human chromosomes that are publicly available from the 1000 Genomes project. Assessment will be based on clarity of report and concordance with results obtained by the instructor. □

Assessment of Competencies for Doctoral Degree		Environmental and Occupational Hygiene: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Critically evaluate environmental and human exposure data.	ENV H 583: Thesis Research Proposal Preparation	<u>Didactic Opportunity</u> : Module 2, reading the literature. <u>Assessment Opportunity</u> : PhD Qualifying Exam. Students critically evaluate a published research article on environmental and human exposure data.
2. Conceive and develop original research that advances knowledge in the field of environmental and occupational health sciences.	ENV H 583: Thesis Research Proposal Preparation PhD qualifying exam	<u>Didactic Opportunity</u> : ENV H 583. Weeks 2, 3. Lectures on writing specific aims and NIH grant review process. <u>Assessment Opportunity</u> : PhD Qualifying Exam. Students develop a proposal that builds on prior research from an assigned paper.
3. Formulate and apply appropriate techniques for collection and/or modeling of environmental or human exposure data.	ENV H 555: Instrumental Methods for Industrial Hygiene Measurement: Laboratory ENV H 595: Research Rotation	<u>Didactic Opportunity</u> : ENV H 555. Lab guides for eight distinct exposure assessment/chemical characterization experiments, accompanied by in-class mini-lectures for each of the experiments. Example: module 3, Airborne Particle Characterization. <u>Assessment Opportunity</u> : ENV H 595. Research Rotation. Students prepare an oral presentation that summarizes the formulated and applied approach from their research rotation.

Assessment of Competencies for Doctoral Degree		Environmental Toxicology: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Conceive, develop, and conduct original research that advances knowledge in the field of environmental toxicology.	ENV H 583: Thesis Research Proposal Preparation	<u>Didactic Opportunity</u> : Week 5. Students critique a proposal from a previous offering of the course using a rubric. <u>Assessment Opportunity</u> : Week 10. Final proposal. Students turn-in multiple drafts for feedback and engage in peer review activities before submitting the final version of their doctoral dissertation research proposal.
2. Apply advanced knowledge and methodologies from supporting disciplines (e.g., molecular biology, biochemistry, physiology, pathology) to original research in environmental toxicology.	ENV H 800: Doctoral Dissertation	<u>Didactic Opportunity</u> : Students work with their faculty adviser and dissertation committee to conduct original research which demonstrates advanced knowledge and methodologies from supporting disciplines in environmental toxicology (e.g., molecular biology, biochemistry, physiology, pathology, epidemiology, biostatistics), with the goal of applying such knowledge and methodologies toward their environmental toxicology-related research. <u>Assessment Opportunity</u> : Public presentation of the use of such supportive methodologies to generate research findings in toxicology journal articles, and a written doctoral dissertation. The doctoral dissertation committee is charged with assessing the application of the advanced knowledge and methodologies, and with determining if the student passes the final examination.
3. Demonstrate the ability to effectively communicate original research findings both orally (e.g., at a scientific conference) and through preparation of an original manuscript suitable for publication in a peer reviewed journal in the field of environmental toxicology.	ENV H 800: Doctoral Dissertation	<u>Didactic opportunity</u> : Students work with their faculty adviser over multiple quarters to present the work at scientific conferences. They are also expected to publish their work in peer-reviewed toxicology journals, or journals in related disciplines to demonstrate the ability to effectively communicate their findings. <u>Assessment Opportunity</u> : Students present and defend their findings in an orally presented summation of their work and submit a written dissertation. These are evaluated by members of the dissertation committee who determine if the student has effectively communicated their findings.

Assessment of Competencies for Doctoral Degree		Epidemiology: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Develop research proposals that present study aims, scientific background, public health significance, and detailed methods for carrying out epidemiologic studies.	EPI 584: Doctoral Dissertation Seminar EPI 588: Preparing, Writing and Critiquing Scientific Research Proposals	EPI 588□ <u>Didactic Opportunity:</u> Weeks 1-6. Lectures and readings from successful grant proposals focus on how to write specific aims, background, innovation, and research strategy sections of a research proposal. □ <u>Assessment Opportunity:</u> Week 10. Students write and submit a proposal using an epidemiologic approach to address a relevant research question related to public health. Assessed individually by faculty. □ EPI 584□ <u>Assessment Opportunity:</u> Weeks 2-10. Students write and present a draft of their doctoral short proposal. They also submit written critiques of peer proposals. Assessed individually.
2. Describe the impact of missing data on causal inference and demonstrate how to address missing data in an epidemiologic analysis.	EPI 515: Advanced Epidemiologic Methods □ I	<u>Didactic Opportunity:</u> Weeks 9-11. Lectures 16, 18, 19, and 20, readings and group activities focus on the impact of missing data on validity and causal inference. Methods for single and multiple imputation are presented, including statistical code to conduct these methods. Readings include both methods and applied articles. □ <u>Assessment Opportunity:</u> Week 11. In the Missing Data Mini Data Analysis Project, students will use statistical software to summarize the degree of missingness in an epidemiologic dataset, conduct imputations to address missing data, and perform an analysis using the imputed dataset. Assessed individually.
3. Apply model-based advanced epidemiologic approaches to address limitations of traditional epidemiologic analysis methods.	EPI 516: Advanced Epidemiologic Methods □ II	<u>Didactic Opportunity:</u> Weeks 1-2, 4-6. Lectures 1-3. Focus on the theory and application of mediation analyses in epidemiologic research. Lectures 8-9 focus on the application of propensity scores to address confounding in epidemiologic studies. Lectures 10-13 focus on inverse probability weighting and marginal structural models to address time-varying confounding. Readings and group activities supplement lecture material. □ <u>Assessment Opportunity:</u> Weeks 3, 6, 10. In the Mediation (week 3) and Marginal Structural Model (week 10) data analysis projects, students will use statistical software to conduct and report the results of these advance methods analyses. In the Propensity Score Homework (week 6), students will use statistical software to conduct and interpret an propensity score analysis to adjust for confounding. Assessed individually.

Assessment of Competencies for Doctoral Degree		
Global Health, Metrics and Implementation Science: Doctor of Philosophy		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Apply concepts, theories, and frameworks used for implementation science in global health. □	GH 535: Advanced Methods for Global Health I	<p><u>Didactic Opportunity</u>: Sessions 3-5, 7-11, 13-15, address this competency. For example: Session 5, Evidence-Based Practices: Adaptation, Fidelity, and Dose (Week 3).</p> <p><u>Assessment Opportunity</u>: Weekly graded assignments (3-15) and final graded assignment in which students develop a research proposal that applies concepts, theories, and frameworks used for implementation science in global health.</p>
2. Select appropriate quantitative methods to evaluate the effectiveness of interventions and implementation strategies using data sources common in low-resource settings globally.	GH 536: Advanced Methods for Global Health II	<p><u>Didactic Opportunity</u>: Weeks 8-10: Presentations and readings on trial design and quantitative analysis methods to evaluate interventions in global health.</p> <p><u>Assessment Opportunity</u>: Graded assignments in which students select a trial design and quantitative analysis methods, and defend their choices. Example: session 13/HW3, in-class exercise in which students present a hypothetical study design for group feedback.</p>
3. Design a quasi-experimental study, and select and apply analytic methods appropriate to the research question posed.	GH 537: Advanced Methods for Global Health III	<p><u>Didactic Opportunity</u>: Weeks 1-2. Selecting quasi-experimental designs to optimize causal inference; Weeks 9-10. Selection and application of methods of analysis for quasi-experimental design.</p> <p><u>Assessment Opportunity</u>: Graded assignment (HW1) in which students design a hypothetical quasi-experimental study and discuss why they chose a specific design to address threats to causal inference and validity; final project in which students select specific quasi-experimental design, apply methods learned in class, and interpret/report findings, includes written report and an in-class presentation.</p>

Assessment of Competencies for Doctoral Degree		Global Health, Pathobiology: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Explain experimental approaches for elucidating mechanisms used by pathogens for subverting host responses or exploiting host processes.	PABIO 551: Biochemistry and Genetics of Pathogens and their Hosts □ PABIO 552: Cell Biology of Human Pathogens and Disease	PABIO 551 <u>Didactic Opportunity</u> : Weeks 1-10. Lectures focused on core basis science principles with examples of pathogenic mechanisms; week 2, 9. Lectures on experimental approaches; weeks 3-4. Lectures on host pathogen interactions; weeks 1-10. Reading current literature relevant to lecture topic with critical analysis of the hypothesis tested, experimental approaches, data interpretation and conclusions. □ <u>Assessment Opportunity</u> : Problem sets, weeks 3, 6, 9, midterm. Students are given problem sets (graded individually) requiring them to synthesize together and/or explain basic science concepts, pathogenic mechanisms, and laboratory-based experimental approaches.
2. Apply modern molecular approaches to parsing the unique cell biologies of hosts and their pathogens, and identifying potential targets for interventions for infectious disease	PABIO 551: Biochemistry and Genetics of Pathogens and their Hosts □ PABIO 552: Cell Biology of Human Pathogens and Disease	PABIO 551 <u>Didactic Opportunity</u> : Weeks 1-10. Lectures focused on core basis science principles with examples of pathogenic mechanisms; week 2, 9. Lectures on experimental approaches; weeks 3-4. Lectures on host pathogen interactions; weeks 1-10. Reading current literature relevant to lecture topic with critical analysis of the hypothesis tested, experimental approaches, data interpretation and conclusions. □ <u>Assessment Opportunity</u> : Problem sets, weeks 3, 6, 9, midterm. Students are given problem sets (graded individually) requiring them to synthesize together and/or explain basic science concepts, pathogenic mechanisms, and laboratory-based experimental approaches.
3. Identify potential targets for interventions in infectious disease.	PABIO 551: Biochemistry and Genetics of Pathogens and their Hosts □ PABIO 552: Cell Biology of Human Pathogens and Disease	PABIO 552 <u>Didactic Opportunity</u> : Weeks 6, 8. Lectures on influenza and vaccine design (week 6), and antibiotic development and targets (week 8). Weeks 6, 8. Students assigned readings based on influenza and vaccine design, and chemical biology and antibiotic development, respectively. In discussion, students will critically analyze the experimental approaches, data, conclusions, and applicability of a research article to infectious disease intervention. □ <u>Assessment Opportunity</u> : Week 11. Final. A short essay question will focus on intervention targets for infectious disease.

Assessment of Competencies for Doctoral Degree		
Health Services: Doctor of Philosophy		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Select and apply an appropriate statistical method for a variety of health services problems pertaining to health delivery, utilization, and outcomes, including using administrative databases or surveys, and interpret the analyses appropriately.	HSERV 523: Advanced Health Services Research Methods I: Large Public Databases, Big Data	<u>Didactic Opportunity</u> : Week 1-10. Course lectures and readings from Gelman A. and Hill J. Data Analysis Using Regression and Multilevel Hierarchical Models. Cambridge University Press. □ <u>Assessment Opportunity</u> : Week 10. Take-home final that requires students to select and apply an appropriate statistical method for a health service research question.
2. Demonstrate clear, concise, and compelling grant writing skills covering each component of the NIH technical grant application.	HSERV 578: Preparing, Writing and Critiquing Scientific Research Proposals	<u>Didactic Opportunity</u> : Week 1-10. Lecture and readings including grant funding announcements and instructions, and Ardehali H. How to write a successful grant application and research paper. Circ Res. 2014 Apr 11;114(8):1231-4. doi: 10.1161/CIRCRESAHA.114.303695. □ <u>Assessment Opportunity</u> : Week 9/Module 9. Final grant proposal submitted for a grade.
3. Conduct health services research, including applying advanced health services methods to answer a research question, and present and interpret results.	HSERV 523-525: Advanced Health Services Research Methods: I: Large Public Databases, Big Data; II: Hierarchical and Incomplete Data; III: Casual Inference Using Observational Daa HSERV 578: Preparing, Writing and Critiquing Scientific ResearchProposals	HSERV 525 <u>Didactic Opportunity</u> : Week 1-10. Lectures and readings. □ <u>Assessment Opportunity</u> : Week 10. Final student project presentations and final paper due and students are assessed on their ability to have selected and applied the appropriate methods and interpreted the results accurately.

Assessment of Competencies for Doctoral Degree		Nutritional Sciences: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Critically evaluate the scientific literature examining associations between dietary intake of macronutrients and micronutrients with risk of chronic disease.	NUTR 562: Nutrition and Chronic Disease	<p><u>Didactic Opportunity:</u> Weeks 2-10. Readings, lectures, and discussions throughout the quarter explore associations between dietary intake of macronutrients and certain micronutrients with risk of chronic disease, as well as medical nutrition therapy approaches for each chronic disease (CVD, diabetes, obesity, chronic kidney disease, various GI disorders, cancer, HIV/AIDS). For example, a reading assigned in Week 3 is: Bohn L et al. Diet low in FODMAPs reduces symptoms of IBS as well as traditional dietary advice: a RCT. Gastroenterol 2015; 149: 1399-1407.</p> <p><u>Assessment Opportunity:</u> By week 1, students are assigned to groups to work together in critically evaluating the evidence for and against the effectiveness of several therapeutic diet approaches used in chronic disease treatment. Students collaborate to prepare and submit an annotated bibliography, on which each student's contribution is assessed individually, and deliver a presentation summarizing evidence for known associations between dietary intake of macro-and micronutrients and risk of chronic disease, as well as efficacy of an assigned therapeutic diet, and concluding with a recommendation based on their research. The annotated bibliography is due week 4 (draft) and week 9 (final). The therapeutic diet presentation takes place in week 10.</p>
2. Appraise a public health and/or nutrition intervention using appropriate evaluative and analytical methodologies.	NUTR 531: Public Health Nutrition	<p><u>Didactic Opportunity:</u> Week 1-2. Lab presentation to discuss how to conduct pragmatic qualitative research. Students review interview guides created by course instructors. Week 1-10. Lab Project. Students observe practices, interview stakeholders, analyze interviews, and assess changes implementation in a community-based policy development project.</p> <p><u>Assessment Opportunity:</u> Week 10. The Lab Project. Students develop an individually assessed annotated bibliography related to the lab project topic. They also develop and submit an Executive Summary and a Report for the community-based clients and other stakeholders. Additionally, they prepare and conduct a presentation for the Client and other stakeholders. Student assessment includes the appropriate use and interpretation of the qualitative data collected. Each student has an individual role assignment in the group project and receives an individual and a group grade.</p>
3. Develop a presentation of a specific nutrition-related topic that integrates novel and/or recent findings with existing knowledge.	NUTR 521: Nutrition and Metabolism II	<p><u>Didactic Opportunity:</u> Weeks 1-3. Lectures on micronutrients set the stage for student selection of a controversial topic in micronutrient nutrition. Instructions regarding selection are discussed.</p> <p><u>Assessment Opportunity:</u> Week 10. Each student will spend the quarter reviewing a current controversial topic in micronutrient nutrition, complete a literature review, and prepare a position paper on the topic. This assignment will develop over the quarter, and there are two different opportunities to workshop/peer review the paper in the class. Students submit their papers for assessment and provide a short presentation of their topics during the last week of class.</p>

Assessment of Competencies for Doctoral Degree		Public Health Genetics: Doctor of Philosophy
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Analyze a current problem in genetic research using appropriate genetic epidemiology methods.	PHG 511: Genetic Epidemiology	<p><u>Didactic Opportunity</u>: Week 7, lecture 14. Family-based designs and tests in the age of large-scale gene-associations studies.</p> <p><u>Assessment Opportunity</u>: Week 7. Homework assignment 4. Discuss how recombination is leveraging in GWAS. Calculate the association between genetic variants and Hirschsprung disease using a family-based study design, complete a linkage analysis exercise.</p>
2. Investigate the ethical, financial, legal, social, and policy implications of current applications of genomic knowledge and technologies in public health.	PHG 512: Legal, Ethical, and Social Issues in Public Health Genetics	<p><u>Didactic Opportunity</u>: Lectures and readings throughout the course that address current applications of genomic knowledge or technology through ethics, legal, social, and/or policy frameworks; e.g., week 3: Ethical Dilemmas in Prenatal Diagnosis; week 7: Race, Ancestry, and Genomics; week 8: The Tension between Disabilities Advocates and Genetics. □</p> <p><u>Assessment Opportunity</u>: Students investigate the ethical, financial, legal, and/or policy implications of a current application of genomic knowledge or technology of their choosing. They develop an oral presentation assuming a specific stakeholder role (e.g., advocate, academic researcher, clinician, policymaker) and are assessed based on their application of at least one ethical, legal, or policy framework discussed in class to defend their position.</p>
3. Design research plans using qualitative methods to explore bioethical issues.	PHG 527: Social Science Research Methods	<p><u>Didactic Opportunity</u>: Week 3. Lecture, "how to design a qualitative study." Assigned readings: Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res 2005;15(9):1277-88. Attride-Stirling J. Thematic networks: An analytic tool for qualitative research. Qual Res 2001;1(3):385-405. Hermanowicz JC. The great interview: 25 strategies for studying people in bed. Qual Soc 2002;25(4):479-99. Freeman T. &#39;Best practice&#39; in focus group research: Making sense of different views. J Adv Nurs. Dec 2006;56(5):491-97. Sim J. Collecting and analysing qualitative data: Issues raised by the focus group. J Adv Nurs. Aug 1998;28(2):345-52.</p> <p><u>Assessment Opportunity</u>: Assignment 1. Using the R21 format, students produce a grant proposal that applies a qualitative methodology to a bioethical issue or problem.</p>

- 4) 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.**

As is evident from the list of required coursework provided for each public health doctoral degree in D18.1, each student completing a doctoral degree in the SPH is exposed to a variety of public health research methods in the context of a population health framework. All doctoral degrees require at least one Epidemiology courses (in some cases jointly listed with a Biostatistics course number) and at least one Biostatistics or quantitative methods course. Each doctoral degree also requires at least one additional research methods course specific to its field. The discovery and/or translation aspects are covered in several ways, including the departmental or program seminar series, in exposure to various applications as part of biostatistics consulting, in specific areas of application in an aspect of the environment or occupational health, and so forth. The breadth of application and translation to a range of audiences is assured by the approved electives for each degree, and monitored by the student's doctoral committee as part of the process leading up to the General Examination. The instruction and assessment of these electives is typically equivalent to 4 or 5 quarter credits, roughly equivalent to 3 semester credits.

- 5) Briefly summarize policies and procedures relating to production and assessment of the final research project or paper.**

All dissertation topics for a doctoral student must be advised on and agreed to by the student and their assigned advisor/doctoral supervisory committee. The dissertation must be independent, original research, and must be documented fully and appropriately.

A distinguishing feature of doctoral committees at the UW is the inclusion of a Graduate School Representative (GSR) from a department or discipline other than that of the student. The GSR has responsibility to uphold doctoral level standards across disciplines.

Typically, the student meets with their faculty advisor and other faculty identified by their research focus, to learn about research opportunities early in the program. They attend seminars and other department events with faculty. As they narrow down their topic, students meet further with chosen faculty and start to develop their research question. Students choose their dissertation chair and committee, and complete any required forms and/or training necessary (which departments provide).

A student then needs to write and submit a dissertation proposal that is approved by the entire committee. The dissertation must be submitted by the appropriate deadlines as specified by the department or program.

Research conducted for a doctoral dissertation is carried out using rigorous methods appropriate to the research questions that generate new knowledge, apply concepts and methods from one or more branches of science relevant to public health, and is presented in a scholarly format. For many of the doctoral degrees primary data collection is a requirement. The dissertation demonstrates the student's comprehensive knowledge of the substantive area of the study and the research methods used.

The dissertation represents the culmination of the doctoral program, and an opportunity to integrate and apply the concepts and methods learned in coursework. Students are required to write a dissertation, suitable for publication as three papers in peer-reviewed journals, which needs to address an issue of importance in their chosen field of study. The length of the dissertation varies by department.

For example, in Epidemiology, the doctoral student must pass three examinations. The first is the “Doctoral Preliminary Examination” (sometimes referred to as a “qualifying exam” by other graduate programs) in order to be permitted to proceed to develop a dissertation project. This exam focuses on the student’s command of epidemiologic methods as taught in the core courses (principally EPI 512/EPI 513: Epidemiologic Methods I/II) and is usually taken in June of the first year in the PhD program. The student is allowed two attempts to pass the examination. Once the doctoral committee has been formed, including the appointment of the GSR, the second exam is developed by the committee, this is the “General Exam,” that evaluates the student’s depth of knowledge in substantive and methodological areas directly relevant to the chosen dissertation topic. The “Final Examination” consists chiefly of defending the dissertation work in a public seminar followed by a closed-door question and answer session with the doctoral committee.

6) 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 school.

- Biostatistics: <https://www.biostat.washington.edu/academics/phd/requirements>.
- Epidemiology: <https://epi.washington.edu/sites/default/files/PhD%20Handbook%202018.pdf>.
- Global Health: <https://globalhealth.washington.edu/sites/default/files/PhD%20in%20Global%20Health%20Student%20Handbook%202019.pdf>.
- Pathobiology: <https://globalhealth.washington.edu/sites/default/files/Handbook%202018-19%20edited%207%20%202018.pdf>.
- Health Services: <http://depts.washington.edu/hservphd/doc/phdhandbook.pdf>.
- Nutritional Sciences:
 - <https://nutr.uw.edu/students/graduate/grad-student-portfolio/>
 - <https://nutr.uw.edu/students/graduate/registering/>
- Public Health Genetics:
 - http://iphg.biostat.washington.edu/sites/default/files/PhD_Guidelines_Part_1.pdf.
 - http://iphg.biostat.washington.edu/sites/default/files/PhD_Guidelines_Part_2_2015-02-11.pdf.

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D18.6.

7) Include completed, graded samples of deliverables associated with the advanced research project. The school must provide at least 10% of the number produced in the last three years or five examples, whichever is greater.

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D18.7.

8) Briefly explain how the school 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.

As reviewed in D17.8, the SPH Curriculum and Educational Policy Committee (CEPC) established three options for programs to meet the basic public health knowledge requirements. The options were: 1. develop and require a new course based on public health knowledge; 2. incorporate the resources into existing courses; or 3. make resources available online and require that students complete assigned modules on their own. Each of the three options, together with relevant additional requirements, was approved by CEPC as being equivalent to the content and assessments for a 3-credit semester course.

The following table provides detail on the options chosen to cover introductory public health knowledge for each individual doctoral degree.

Department/ Program	Option 1. Created new course	Option 2. Incorporated resources into existing course	Option 3. Made resources available online	Additional option. Content covered in existing courses
Biostatistics	BIOST 504: Foundations of Public Health for Biostatistics		BIOST 504: Foundations of Public Health for Biostatistics	
Environmental and Occupational Health Sciences				ENV H 501: Foundations of Environmental and Occupational Health ENV H 502: Assessing and Managing Risks from Human Exposure to Environmental Contaminants ENV H 503: Adverse Health Effects of Environmental and Occupational Toxicants ENV H 514: Fundamentals of Toxicology BIOST 511: Medical Biometry I BIOST 517: Applied Biostatistics I
Epidemiology		EPI 512: Epidemiologic Methods I EPI 583: Epidemiology Seminar	EPI 583: Epidemiology Seminar	
Global Health	PABIO 550: Diseases and Issues in Global Health		PABIO 550: Diseases and Issues in Global Health	
Health Services		HSERV 522: Health Program Evaluation HSERV 592: Program Seminars	HSERV 592: Program Seminars	HSERV 513: Health Policy Research HSERV 514: Social Determinants of Population Health and Health Disparities
Nutritional Sciences				NUTR 513: Food and Society: Exploring Eating Behaviors in a Social, Environmental, and Policy Context NUTR 531: Public Health Nutrition NUTR 562: Nutrition and Chronic Disease BIOST 511: Medical Biometry I
Public Health Genetics	BIOST 504: Foundations of Public Health for Biostatistics		BIOST 504: Foundations of Public Health for Biostatistics	

- 9) **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.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D18.9.

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

Strengths

- Strengths of the SPH PhD programs include their rigor in the field of study. Most of the degree programs require the format of the dissertation to include three separate publishable papers, within the general framework of the dissertation required by the UW Graduate School. The inclusion of a Graduate School Representative on every doctoral committee, from a department other than the student's home department, provides a way to maintain a common meritorious standard for awarding doctoral degrees across different areas of study at the UW.
- A notable proportion of the PhD graduates obtain a postdoctoral position or a faculty position. The remainder obtain leadership positions in research-related or applied public health fields. For example, of the five Global Health graduates from the 2018-19 academic year, three went into academia and two joined nonprofits. There were ten Health Services graduates in the 2018-19 academic year; three went into academia and three into government (local, state, and federal) positions. In Epidemiology, one-third of graduates in the 2018-19 academic year went into academia, and several others are in government, healthcare, and nonprofit positions.

D19. All Remaining Degrees

- 1) Provide a matrix in the format of Template D19-1 that indicates the required assessment opportunities for each of the defined foundational public health learning objectives (1-12). Typically, the school will present a separate matrix for each degree program, but matrices may be combined if requirements are identical.

Content Coverage for ^ Food Systems, Nutrition, and Health: Bachelor of Arts		
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	NUTR 303: Food Systems: Individual to Population Health	<u>Didactic Opportunity:</u> Week 1. Students consider public health history, philosophy, and values in the discussion section. They are led through a discussion of the Introduction to Public Health presentation from the CDC website: CDC Public Health 101 Series: (https://www.cdc.gov/publichealth101/public-health.html). <u>Assessment Opportunity:</u> Week 1. Students respond to PollEverywhere (a classroom response system in real-time) questions embedded in the slide show.
2. Identify the core functions of public health and the 10 Essential Services*	NUTR 303: Food Systems: Individual to Population Health	<u>Didactic Opportunity:</u> Week 1. Students consider the 10 essential services of public health in the discussion section. They are led through a discussion of The 10 Essential Public Health Services presentation from the CDC website: CDC Public Health 101 Series: Introduction to Public Health (https://www.cdc.gov/stltpublichealth/publichealthservices/essentialhealthservices.html). <u>Assessment Opportunity:</u> Week 1. Students work in small groups (3-4 people) to discuss and submit individual written responses to the following prompt: select any two of the 10 essential public health services and describe an application of it.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	NUTR 303: Food Systems: Individual to Population Health	<u>Didactic Opportunity:</u> Week 2. Students prepare for discussion of qualitative and quantitative methods in discussion by reading Turato. Qualitative and quantitative methods in health: definitions, differences and research subjects. Rev Saude Publica. 2005; 39(3) (http://www.scielo.br/pdf/rsp/v39n3/en_24808.pdf). <u>Assessment Opportunity:</u> Week 2. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses to the following questions: what are some of the basic differences between qualitative and quantitative research? What are their strengths and what are their weaknesses? Fully explain how and why qualitative research is fundamentally different from news reporting and writing books, even though many of the data gathering procedures are the same such as interviewing, observing the environment and people's behaviors, corroborating findings, using quotes, following up on themes, making interpretations, reporting results.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	NUTR 303: Food Systems: Individual to Population Health	<u>Didactic Opportunity:</u> Week 7. In preparation for the discussion, students read the Hahn et al article Trends in Mortality Among Females in the United States, 1900–2010: Progress and Challenges. Prev Chronic Dis 2018;15:170284. (https://www.cdc.gov/pcd/issues/2018/17_0284.htm). <u>Assessment Opportunity:</u> Week 7. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses for assessment to the following questions and prompts: use the CDC NCHS Data Visualization Gallery to identify the major causes of morbidity and mortality from 1950 through present time. What observation(s) can you make about the shifts from 1950 to present time? In the Hahn et al article, the authors speculate about possible environmental factors that may explain some of the changes in mortality rates in women over the decades from 1900-2010. What are some of those factors and how do the authors suggest they may have influenced mortality over time?

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity:</u> Week 8. In preparation for the discussion, students read Bowman et al. Translating the Science of Primary, Secondary, and Tertiary Prevention to Inform the Public Health Response to Diabetes. J Public Health Management Practice. 2003;(Suppl): S8–S14.</p> <p><u>Assessment Opportunity:</u> Week 8. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses for assessment to the following questions and prompts: write definitions for primary, secondary, and tertiary prevention. What aspects of diabetes can be addressed through each of the three prevention strategies? Provide an example of evidence for each approach.</p>
6. Explain the critical importance of evidence in advancing public health knowledge	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity:</u> Week 2. To prepare for discussion, students read pages 3-6 of the report, DHHS Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Evidence-based clinical and public health: generating and applying the evidence. July 26, 2010 (https://www.healthypeople.gov/sites/default/files/EvidenceBasedClinicalPH2010.pdf).</p> <p><u>Assessment Opportunity:</u> Week 2. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses for assessment to the following questions or prompts: based on the presentation, and without referring to your notes, develop a definition of "evidence-based public health practice." What is the importance of evidence-based decision making in public health? Provide an example of an evidence-based policy or program. Are all the components in your definition represented in your example? Now, think about the reading, or other sources you may have found. What is an example of a practice that was not evidence-based? What were the health consequences of implementation of that example?</p>
7. Explain effects of environmental factors on a population's health	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity:</u> Week 3. Lecture "Drivers of food choice and food patterns," week 4, lecture "The Local Food Environment," week 5, lectures "The UW Food Environment " and lecture "Economics and Eating Behaviors: Food Deserts, Food Swamps, and Food Oases," week 6, lecture "Food Security and Food Banks," week 7, lectures "The Role of Farmers Markets" and " Social Disparities: Food, Health, and Income: Seattle Food Supply."</p> <p><u>Assessment Opportunity:</u> Week 8. Students complete and submit the assignment Analyzing the Food Environment and Food Choice. They are required to carefully map their own food environment and then to reflect, in writing, on their process and findings. There are multiple questions posed as prompts for reflection, including the following: reflect on whether your food environment would be able to provide nutritious foods for a different population than yourself. Would your current daily food environment work if you were purchasing/preparing meals for a family? Would you be able to keep costs at a lower level at that point? Does your food pattern require a car for transportation? What if you were limited in physical movement? Would changing your food environment require you to give up time that could be spent doing other things, and is this a reasonable trade-off? What other things might take precedence over diet? What are the possible public health impacts of your food environment?</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity:</u> Week 3. For the discussion, students prepare by reading, (https://www.hsph.harvard.edu/obesity-prevention-source/obesity-causes/genes-and-obesity/), from the Obesity Prevention Source (Harvard TH Chan School of Public Health). This article outlines the contributions of genes and gene-environment interactions to the development of obesity.</p> <p><u>Assessment Opportunity:</u> Week 3. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses for assessment to the following questions: how does "monogenic obesity" differ from "polygenic obesity"? What is a strength of a genome wide association study in identifying genes that increase susceptibility to an outcome like obesity? The authors state that a change in diet, lifestyle, or other environmental factors is required for most people to move from genetic predisposition to obesity. List 3 examples of how changes in behaviors that alter biological responses can affect the likelihood of developing obesity in someone genetically predisposed.</p>
9. Explain behavioral and psychological factors that affect a population's health	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity:</u> Week 4. Students prepare for the discussion by reading, Veloso et al. Psychosocial Factors of Different Health Behaviour Patterns in Adolescents: Association with Overweight and Weight Control Behaviours. Journal of Obesity. 2012; http://dx.doi.org/10.1155/2012/852672.</p> <p><u>Assessment Opportunity:</u> Week 4. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses for assessment to the following questions or prompts: draw a diagram that shows the connections between behavioral factors, psychosocial factors, and weight control behaviors the authors studied. What did the authors identify as protective factors? What did they identify as factors that contribute to increased risk?</p>
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity:</u> Week 3. Lecture "Drivers of food choice and food patterns," week 4, lecture "Analysis of Class Food Patterns/Introduction to Assignment 2," week 5, lecture "Economics and Eating Behaviors: Food Deserts, Food Swamps, and Food Oases," week 6, lecture "Food Security and Food Banks."</p> <p><u>Assessment Opportunity:</u> Week 7. Students complete the assignment Analyzing the Economics of Food Choice. The purpose of this assignment is for students to reflect on the different choices one makes when one has adequate financial access as compared with limited financial access to food. First, students estimate the cost of a healthy one-day food pattern using prices from your usual grocery store. Then determine whether that number of calories and the same nutrients can be obtained for less money (<\$6 per day). Students then reflect on their experiences by responding to questions including "Consider our class discussion about economics and eating behaviors and your reflections on this assignment; what do you think is true about the likelihood of poor health outcomes associated with social inequities, and why?"</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
11. Explain how globalization affects global burdens of disease	NUTR 303: Food Systems: Individual to Population Health	<p><u>Didactic Opportunity</u>: Week 9. In preparation for the discussion, students read the information at the Harvard TH Chan School of Public Health website, Obesity Prevention Source: Obesity Causes, Globalization (https://www.hsph.harvard.edu/obesity-prevention-source/obesity-causes/globalization-and-obesity/).</p> <p><u>Assessment Opportunity</u>: Week 9. Following a presentation by the instructor, students work in small groups (3-4 people) to discuss and submit individual written responses for assessment to the following questions: develop a definition of globalization. How is globalization suggested to contribute to the increased rates of obesity worldwide? What are 3 specific changes that are suggested to contribute to changes in likelihood of obesity?</p>
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	NUTR 302: Food Systems: Harvest to Health	<p><u>Didactic Opportunity</u>: Weeks 1-4. Lectures on beef, pork, fish, and chicken (in the first third of the syllabus - dates vary) are used as case studies to illustrate the connections between human, animal, and ecosystem health. In preparation for these discussions, students read chapters from the course textbook that touch on animal health and how it relates to human and ecosystem health.</p> <p><u>Assessment Opportunity</u>: Week 5. The midterm exam includes at least five relevant questions. In addition, in the first third of the class (the exact week varies but typically around week 4), the instructor gives a presentation on systems thinking (what is it, how to do it, how to consider tradeoffs) to preface an in-class small group activity. Students then work in small groups (5-6 people) to draw a systems diagram illustrating both positive and negative connections between these topics and to think about these connections using a systems thinking exercise. During this in-class group assignment, students are asked to draw and submit a systems diagram by selecting one food systems problem and one food systems solution. They are instructed to think about how their solution will positively and negatively affect 4 domains: human health, environmental health, social health and equity, and occupational health and then to draw lines to show how these domains impact one another. On their diagram, the group is instructed to list at least two potential unintended consequences that arise from their proposed solution and discuss ways they may prevent those consequences. The group then submits diagram at the end of class for completion credit.</p>

Content Coverage for^		
Health Informatics and Health Information Management: Bachelor of Science		
Content	Course number(s) and name(s)	Describe specific assessment opportunity^n
1. Explain public health history, philosophy and values	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity</u> : Week 1. Concepts of history, philosophy, and values introduced in lecture/discussion to this competency by the instructor. Discussion on Chapters 1, 2, and 3 in the text, and the Timeline and Terms of Reference. <u>Assessment Opportunity</u> : Week 1. Pre-assign student teams discuss this topic in their review of the Historical Timeline and in their presentations in response to the questions reflected in this competency, with verbal feedback from the instructor. Knowledge also assessed with historically-based questions in the midterm and in the final exam.
2. Identify the core functions of public health and the 10 Essential Services*	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity</u> : Week 1. Concepts of core functions introduced in lecture/discussion to this competency by the instructor. Discussion on Chapters 1, 2, and 3 in the text, and the Timeline and Terms of Reference. <u>Assessment Opportunity</u> : Week 1. Pre-assign student teams discuss this topic in their review of the Historical Timeline and in their presentations in response to the questions reflected in this competency, with verbal feedback from the instructor. Knowledge also assessed with historically-based questions in the midterm and in the final exam.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity</u> : Week 1, 4. Lecture delivered on Qualitative and Quantitative Table in the syllabus. Lecture explains the major differences and key concepts in the two research approaches. <u>Assessment Opportunity</u> : Week 4, 11. Cohort presentations distinguish the difference between qualitative and quantitative research methods relative to this competency. Knowledge is assessed at presentation, and individually at midterm and at final exam.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity</u> : Week 1, 6. Students introduced to the "Systems Framework: (Figure 1.5) in Chapter 1 and the "Social Determinants of Health" (Figure 2.4) in Chapter 2 regarding this competency. Students will be presented with Blum's Force Field of Health Determinants" from the instructor's lectures. Students are presented with and told to research the 10 leading causes of morbidity and mortality at the national and state level in their team presentations. <u>Assessment Opportunity</u> : Week 1, 6. Cohort presentations with verbal feedback to the team and to assessing individualized midterm and final exam grades.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity:</u> Week 3, 6. Explain and discuss levels of health delivery in chapter 4 with an emphasis on the professional job titles and in Chapter 7 which emphasizes the levels of health care delivery reflective of this competency. <u>Assessment Opportunity:</u> Week 3, 6. Team presentations respond to exact definitions of these three levels of care and the meaning of “science” (as oppose to trust) in delivery and promotion. Verbal feedback to the team from the instructor. Concepts and definition also graded in the midterm and final exam.
6. Explain the critical importance of evidence in advancing public health knowledge	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity:</u> Week 5. Explain and discuss chapter 5 with emphasis on health knowledge that technological advances do not necessarily equate with accuracy or effectiveness but with high cost. Chapter 2 is re-visited in lecture to re-emphasize that the United States’ has a medical model as oppose to social determinants of health model. Historical Timeline and the Qualitative vs Quantitative Table are also re-visited with emphasis on positivism (information derived through reason and logic as rooted in Eurocentric philosophy). <u>Assessment Opportunity:</u> Week 5. The team’s response to the questions relative to this competency are assessed with the instructor’s verbal feedback; individual assessments are done in the midterm and final exam.
7. Explain effects of environmental factors on a population’s health	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity:</u> Week 1, 2. Chapters 2, 7 and 14; Historical Timeline. Chapter 2 reemphasizes the social determinants of health (Figure 2.4) with out-patient care covered in Chapter 7 combined with “new” challenges in Chapter 14. Instructor’s lecture and discussion reflects on the competency by emphasizing these environmental effects on population health with examples drawn from the Historical Timeline. <u>Assessment Opportunity:</u> Week 1, 2. Verbal feedback to the team in their presentations as response to the questions posed to the competency; individual assessments are done in the midterm and the final exam.
8. Explain biological and genetic factors that affect a population’s health	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity:</u> Week 1, 2. Chapters 2, 7 and 14; Historical Timeline. Chapter 2 reemphasizes the social determinants of health (Figure 2.4) with outpatient care covered in Chapter 7 combined with “new” challenges in Chapter 14. Instructor’s lecture and discussion reflects on the competency by emphasizing these biological and genetic effects on population health with examples drawn from the Historical Timeline. <u>Assessment Opportunity:</u> Week 1, 2. Verbal feedback to the team in their presentations as response to the questions posed to the competency; individual assessments are done in the midterm and the final exam.
9. Explain behavioral and psychological factors that affect a population’s health	HIHIM 450: Healthcare Delivery and Policy	<u>Didactic Opportunity:</u> Week 1, 2. Chapters 2, 7 and 14; Historical Timeline. Chapter 2 reemphasizes the social determinants of health (Figure 2.4) with out-patient care covered in Chapter 7 combined with “new” challenges in Chapter 14. Instructor’s lecture and discussion reflects on the competency by emphasizing these behavioral or psychological effects on population health with examples drawn from the Historical Timeline. <u>Assessment Opportunity:</u> Week 1, 2. Verbal feedback to the team in their presentations as response to the questions posed to the competency; individual assessments are done in the midterm and the final exam.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	HIHIM 450: Healthcare Delivery and Policy	<p><u>Didactic Opportunity:</u> Weeks 1-10. Design to be cumulative. Lecture explains aspects of social, political and economic determinants reflected in the entire book, but with special emphasis on vulnerable populations and inequalities in health. The Historical Timeline, and Terms of Reference (i.e. Medicaid, Socialism, etc.) in the text book and the syllabus.</p> <p><u>Assessment Opportunity:</u> Weeks 1-10. Chapters 1-14. Verbal feedback to team presentations; individual assessment from midterm and final exam.</p>
11. Explain how globalization affects global burdens of disease	HIHIM 450: Healthcare Delivery and Policy	<p><u>Didactic Opportunity:</u> Week 1, 2, 8. Explanation and discussion on key points from Chapter 1 emphasizing the U.S. market-oriented approach; Chapter 2 emphasizing “rugged individualism”; Chapter 5 emphasizing Research and Development, and Chapter 14 which emphasizing globalization. Reference is made to the current COVID-19 pandemic. Included Timeline which reflect world health and to the Terms of Reference.</p> <p><u>Assessment Opportunity:</u> Week 1, 2, 8. Verbal feedback to team response to the questions posed regarding the competency. Team are welcome to seek out their own relevant information related to the World Health Organization, or Climate Change, or Pandemics in their presentations. Team assessments are with verbal feedback from the instructor and individual assessment at the midterm and final exam.</p>
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HIHIM 450: Healthcare Delivery and Policy	<p><u>Didactic Opportunity:</u> Week 1, 2, 9. Lectures and discussion stem from content in chapters 1, 2, 5, 14. Aspects of zoonotic diseases such as Eboli and SARS mentioned in Chapter 14 and reference is made to COVID-19. The “social determinant of health” and ecology model is re-emphasized, with “Blum’s Force Field Determinants of Health.” The Timeline is stress regarding historical events of disease passed from animals to humans. Background from a suggested re-reading of chapter 1 regarding “health systems”; chapter 2 regarding “health determinants”; and chapter 5 regarding “health technology” felt to overlap.</p> <p><u>Assessment Opportunity:</u> Week 1, 2, 9. Verbal feedback to team presentations which have responded to the questions posed by the competency. Individual assessment done in the midterm and the final exam.</p>

Content Coverage for ^ Health Informatics and Health Information Management: Masters		
Content	Course number(s) and name(s)	Describe specific assessment opportunity"
1. Explain public health history, philosophy and values	HIHIM 508: Health Information Systems & Leadership	<p><u>Didactic Opportunity</u>: Class session 1. Assigned homework: a. View the YouTube video "Introduction to Public Health" (CDC); b. Read the article "Philosophical Basis for Public Health (Cengage); c. Read the Article "Foundational Values for Public Health" (BMC). □</p> <p><u>Assessment Opportunity</u>: Class session 2. Each student writes a 2-3 page report and explain public health history, philosophy, and values. The written report is graded using a rubric that contains five criteria, including required content, argument, organization, evidence, and mechanics. The student can use the earlier referenced web sites in addition to those that he or she identifies during independent research. □</p>
2. Identify the core functions of public health and the 10 Essential Services*	HIHIM 508: Health Information Systems & Leadership	<p><u>Didactic Opportunity</u>: Class session 1. Assigned homework: a. Read the "CDC Public Health 101 Series: Introduction to Public Health" PowerPoint presentation (CDC); b. View the YouTube video "Mission and Core Parts of Public Health (University of Michigan); c. View the YouTube video "10 Essential Public Health Services" (Great Plains Tribal Chairman's Health Board); and view the YouTube video "Introduction to Public Health Informatics" (CDC). □</p> <p><u>Assessment Opportunity</u>: Class session 2. In the same written report as described in assessment 1, identify and describe the core values of public health and the 10 essential services. In addition, the student will research Public Health Informatics and describe how the role of the health informatics professional can positively influence the public health profession. □</p>
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	HSMGMT 501: Epidemiology/Critical Evidence (quantitative)	<p><u>Didactic Opportunity</u>: Week 1, 4, 8. Lectures focus on how to describe the morbidity and mortality of diseases affecting human populations using quantitative methods and how the epidemiology of diseases are defined (including the use of various study designs and establishing causation). □</p> <p><u>Assessment Opportunity</u>: Week 1, 4, 8. Students will take quizzes during each session to assess their understanding of the role of quantitative methods. In addition, students will work in groups on discussion questions aimed at applying their understanding to a real-world case study. □</p>
	HIHIM 556: Health Care Quality and Technology (qualitative)	<p><u>Didactic Opportunity</u>: Class session 2. Lecture from a qualitative researcher within the School of Medicine focuses on the role of qualitative methods in describing and assessing a population's health.</p> <p><u>Assessment Opportunity</u>: Students explain the role of qualitative methods in a patient centered outcomes study design discussion post and its application in describing and assessing a population's health.</p>
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HIHIM 556: Health Care Quality and Technology	<p><u>Didactic Opportunity</u>: Class session 2. Lecture focuses on major causes and trends in morbidity listed as clinical quality measures within the United States Health Information Knowledge Base.</p> <p><u>Assessment Opportunity</u>: Each student identifies a major cause of morbidity with an upward trend in the US and explain what clinical quality measure could be used to monitor its progression in the US.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSMGMT 501: Epidemiology/Critical Evidence	<u>Didactic opportunity</u> : Week 1. Students have multiple reading assignments and the instructor gives a lecture that discusses prevention and screening tests, including their characteristics (e.g., sensitivity and specificity). □ <u>Assessment opportunity</u> : Week 1. Students complete a quiz during the first session to assess their understanding.
6. Explain the critical importance of evidence in advancing public health knowledge	HSMGMT 501: Epidemiology/Critical Evidence	<u>Didactic Opportunity</u> : Week 4, 8. Students have a reading assignment and the instructor will give lectures that discuss the importance of evidence generated through epidemiological methods to inform both public health knowledge and public policy. <u>Assessment Opportunity</u> : Week 4, 8. Students take a quiz during each session to assess their understanding. In addition, students read a peer-reviewed article and answer questions about the article which enables them to apply their understanding of concepts.
7. Explain effects of environmental factors on a population's health	HIHIM 540: Consumer Health Informatics	<u>Didactic Opportunity</u> : Class session 1, 2, 3. Lecture focuses on the ecological model of health. <u>Assessment Opportunity</u> : Each student selects a major cause of morbidity and mortality and explain the effects that environmental factors have on the selected topic within a discussion forum.
8. Explain biological and genetic factors that affect a population's health	HIHIM 540: Consumer Health Informatics	<u>Didactic Opportunity</u> : Class session 1, 2, 3. Lecture focuses on the ecological model of health. <u>Assessment Opportunity</u> : Each student selects a major cause of morbidity and mortality and explain the effects that biological and genetic factors have on the selected topic within a discussion forum.
9. Explain behavioral and psychological factors that affect a population's health	HIHIM 540: Consumer Health Informatics	<u>Didactic Opportunity</u> : Class session 1, 2, 3. Lecture focuses on the ecological model of health. <u>Assessment Opportunity</u> : Each student selects a major cause of morbidity and mortality and explain the effects that behavioral and psychological factors have on the selected topic within a discussion forum.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	HIHIM 540: Consumer Health Informatics	<u>Didactic Opportunity</u> : Class session 1, 2, 3. Lecture focuses on the ecological model of health. <u>Assessment Opportunity</u> : Each student selects a major cause of morbidity and mortality and explain the effects that social, political, and economic factors have on the selected topic within a discussion forum.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
11. Explain how globalization affects global burdens of disease	HIHIM 525: Healthcare Database and Applications	<u>Didactic Opportunity</u> : Class session 2. Lecture focuses on the Global Burden of Disease Lancet article along with a couple of presentations from Hans Rosling's TED Talks (Let my data change your mindset; The best statistics you've never seen). <u>Assessment Opportunity</u> : Students explain how globalization affects global burdens of disease by identifying a clinical condition from the 2015 Lancet Global Burden of Disease article and provide a brief description of the global change overtime for the condition and a hypothesis for its increase or decrease overtime.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HIHIM 540: Consumer Health Informatics	<u>Didactic Opportunity</u> : Class session 1. Students view Dr Peter Rabinowitz's UW Mini-med school's April 15, 2015 video presentations (Part I and II) about One Health. <u>Assessment Opportunity</u> : Explain using an ecological perspective on the connections among human health, animal health and ecosystem health through an infographic (Resource: https://www.cdc.gov/onehealth/resource-library/one-health-graphics.html).

Content Coverage for ^ Health Administration: Masters		
Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Explain public health history, philosophy and values	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 1. Lecture/readings/discussion: An Overview of How Health Services are Organized in America: How We Got to Where We Are Today, a Historical Perspective; Readings: Shi/Singh, Chapters 1, 3; Emanuel, Chapters 1, 5. <u>Assessment Opportunity</u> : Week 3. Online quiz to explain public health history, philosophy, and values terms and concepts & equity, diversity and integrity terminology and concepts.
2. Identify the core functions of public health and the 10 Essential Services*	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 2. Lecture/readings/discussion: The Public Health Sector: What It Is, What It Does and The 10 Essential of Public Health." Guest Lecturer: Patty Hayes RN, Director of Public Health Seattle/King Co. Readings: Shi/Singh, Chapter 2. "Is Health Care a Right? (The New Yorker); Introduction to Public Health You Tube Video. <u>Assessment Opportunity</u> : Week 3. Online quiz, public health history, philosophy, and values terms and concepts & equity, diversity and integrity terminology and concepts.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	HSMGMT 503: Population Health Management	<p>Quantitative <u>Didactic Opportunity:</u> Week 5. Total cost of Care (Report)The value of collecting patient experience data. <u>Assessment Opportunity:</u> Week 5. Read and analyze a total cost of care report to identify areas of risk in a given population, and provide a synopsis of next steps to form a strategy to address those issues, including explanation of further qualitative and quantitative analysis.</p> <p>Qualitative <u>Didactic Opportunity:</u> Week 8. Lecture: The value of collecting patient experience data. <u>Assessment Opportunity:</u> Week 8. Students conduct interviews and report on the patient experience of care; and are assessed on their ability to explain the value of qualitative methods in value based payment organizations.</p>
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HSMGMT 501: Epidemiology/Critical Evidence Appraisal	<p><u>Didactic Opportunity:</u> Week 1, 2. Drug Use and Dignity: Exploring the Potential for Supervised Consumption Sites in King County, WA (webinar, 1 hour in duration). <u>Assessment Opportunity:</u> Week 2. Quiz on major causes and trends of morbidity and mortality in King County.</p>
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSMGMT 503: Population Health Management	<p><u>Didactic Opportunity:</u> Week 1. Lecture and reading: Frieden's Health Pyramid. <u>Assessment Opportunity:</u> Week 1. Quiz on Frieden's Health Pyramid, and Week 7 final individual paper in which students are assessed on describing the role of prevention in relationship to total cost of care in populations.</p>
6. Explain the critical importance of evidence in advancing public health knowledge	HSMGMT 501: Epidemiology/Critical Evidence Appraisal	<p><u>Didactic Opportunity:</u> Week 10. Readings: Celentano, D. D., Szklo, M., & Gordis, L. (2019). Gordis epidemiology. Philadelphia, PA: Elsevier. Chapter 19. Epidemiology and Public Policy. <u>Assessment Opportunity:</u> Individual final exam. Critical Appraisal of evidence. In particular Topic 3 of CAP: "Is evidence applicable to patient population."</p>
7. Explain effects of environmental factors on a population's health	HSMGMT 503: Population Health Management	<p><u>Didactic Opportunity:</u> Week 9. Reading: Robert D. Brook et al., Particulate Matter Air Pollution and Cardiovascular Disease: An Update to the Scientific Statement From the American Heart Association. Circulation. 2010;121:2331-2378. <u>Assessment Opportunity:</u> Quiz on the effects of environmental factors on a population's health.</p>

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
8. Explain biological and genetic factors that affect a population's health	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 8 readings. Racial Differences in Hypertension: Implications for High Blood Pressure Management (Journal Article) Lackland, Daniel T. "Racial Differences in Hypertension: Implications for High Blood Pressure Management." The American Journal of the Medical Sciences, vol. 348, no. 2, 2014, pp. 135–138; "Application of Single-Nucleotide Polymorphism-Related Risk Estimates in Identification of Increased Genetic Susceptibility to Cardiovascular Diseases: A Literature Review." Frontiers in Public Health, vol. 5, 2018, p. 358; Ageing as a Risk Factor for Disease; Niccoli, Teresa, and Linda Partridge. "Ageing as a Risk Factor for Disease." Current Biology, vol. 22, no. 17, 2012, pp. R741–R752. <u>Assessment Opportunity</u> : Week 8. Quiz conducted on knowledge of biological and genetic factors that affect a population's health.
9. Explain behavioral and psychological factors that affect a population's health	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 8 reading. Salazar LF, Crosby RA, DiClemente RJ. "Health Behavior in the Context of the "New" Public Health." <u>Assessment Opportunity</u> : Quiz on the 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	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Weeks 1, 2, 3. Lecture: Social Determinants of Health, Disparities in Care and Strategies to Correct Them; Readings: Shi/Singh, Chapter 11, and other readings. <u>Assessment Opportunity</u> : Week 6: Students write a paper on the Healthier Washington Project & the 10 Essential Roles of Public Health: A High-Level Policy Prescription in the State of Washington, to explain the social, political and economic determinants of health and how they contribute to WA state population health and health inequities.
11. Explain how globalization affects global burdens of disease	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 10. "Environmental and ecologic challenges we face." Guest lecturers from the health industry, including John Leigh (Virginia Mason) and Max Savinsky (WPSR). <u>Assessment Opportunity</u> : Week 11: Final paper. Requires explanation of how globalization affects global burdens of disease within the context and content covered in the class.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 11. "Environmental and ecologic challenges we face." Guest lecturers from the health industry including John Leigh (Virginia Mason) and Max Savinsky (WPSR). <u>Assessment Opportunity</u> : Week 11. Final paper. Requires explanation of ecological perspective on the connections among human health, animal health, and ecosystem health, as a component of cumulative learning in class.

Content Coverage for ^ Health Administration, Executive: Masters		
Content	Course number(s) and name(s)	Describe specific assessment opportunity ^a
1. Explain public health history, philosophy and values	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 1. Readings for session 1 include Goldstein et al, Introduction to Public Health - Promises and Practices chapter 1 and Public Health 3.0. <u>Assessment Opportunity</u> : Week 1. Complete in-class poll to explain the philosophy and values of public health and some key moments in the history of the discipline.
2. Identify the core functions of public health and the 10 Essential Services*	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 1. Lecture/readings/discussion: Ten Essential Public Health Services/Who Provides What Care (lecture/guest presenter from KingCo/SPH). <u>Assessment Opportunity</u> : Week 1. Quiz to 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	HSMGMT 503: Population Health Management	Quantitative <u>Didactic Opportunity</u> : Week 1. Analysis and Interpretation of Public Health Data, part 1, https://www.nwcphp.org/training/opportunities/online-courses/part-2-basic-concepts-in-data-analysis-for-community-health-assessment ; and part 2, https://www.nwcphp.org/training/opportunities/online-courses/part-3-basic-concepts-in-data-analysis-for-community-health-assessment . <u>Assessment Opportunity</u> : Week 5. Quiz explaining the role of quantitative methods and sciences in describing and addressing a population's health. Qualitative <u>Didactic Opportunity</u> : Week 1. In-class presentation and lecture (qualitative research, PowerPoint). <u>Assessment Opportunity</u> : Week 1. Quiz explaining the role of qualitative methods and sciences in describing and addressing a population's health.
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	HSMGMT 501: Epidemiology/Critical Evidence Appraisal	<u>Didactic Opportunity</u> : Week 1. Drug Use and Dignity: Exploring the Potential for Supervised Consumption Sites in King County, WA (webinar, 1 hour in duration). <u>Assessment Opportunity</u> : Week 1. Quiz on major causes and trends of morbidity and mortality in King County.
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 5. Lecture and reading: Salazar LF, Crosby RA, DiClemente RJ. Health Behavior in the Context of the "New" Public Health. <u>Assessment Opportunity</u> : Week 5. Quiz on the science of primary, secondary, and tertiary prevention in population health, including health promotion, screening, etc.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
6. Explain the critical importance of evidence in advancing public health knowledge	HSMGMT 501: Epidemiology/Critical Evidence Appraisal	<u>Didactic Opportunity</u> : Week 10. Readings: Celentano, D. D., Szklo, M., Gordis, L. (2019). Gordis epidemiology. Philadelphia, PA: Elsevier. Chapter 19. Epidemiology and Public Policy. <u>Assessment Opportunity</u> : Individual final exam. Critical Appraisal of evidence. In particular Topic 3 of CAP: "Is evidence applicable to patient population."
7. Explain effects of environmental factors on a population's health	HSMGMT 590: Special Topics in Health Services	<u>Didactic Opportunity</u> : Session 2, week 5. Explore the ecological perspective linking human, animal and ecosystem health, and our role as leaders in making this happen. In-class discussion with local healthcare and social responsibility experts in climate change and global health. Readings include: The Health Impacts of Globalization: A Conceptual Frame Work (Maud MTE Huynen, Pim Martens and Henk BM Hilderink); Aug, 2005 Globalization and Health. More Than 900 Examples of How Climate Change Affects Business (Carmen Nobel) HBR March 2017. How Health Systems Are Meeting the Challenge of Climate Change (Alice Chien and Vivek Murthy) HBR September 2019. The US Government Engagement in Global Health: A Primer (Kaiser Family Foundation) February, 2019. <u>Assessment Opportunity</u> : Individual final paper. Business proposal with the Subject: "Our organizations role and leadership accountability for environmental stewardship in our local and global community." <u>Assessment Opportunity</u> : Write a business proposal from you, to your direct report (VP, CEO, Board etc.), advocating for a specific new initiative in your department, division or organization improving (lessening) the environmental impact it has in the local and global community; include addressing the effects of environmental factors on a population's health.
8. Explain biological and genetic factors that affect a population's health	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 8 Readings. Racial Differences in Hypertension: Implications for High Blood Pressure Management (Journal Article) Lackland, Daniel T. "Racial Differences in Hypertension: Implications for High BloodPressure Management." The American Journal of the Medical Sciences, vol. 348, no. 2,2014, pp. 135–138; "Application of Single-Nucleotide Polymorphism-Related Risk Estimates in Identification of Increased Genetic Susceptibility to Cardiovascular Diseases: A Literature Review." Frontiers in Public Health, vol. 5, 2018, p. 358; Ageing as a Risk Factor for Disease; Niccoli, Teresa, and Linda Partridge. "Ageing as a Risk Factor for Disease." Current Biology, vol. 22, no. 17, 2012, pp. R741–R752. <u>Assessment Opportunity</u> : Quiz on the biological and genetic factors that affect a population's health.

Content	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
9. Explain behavioral and psychological factors that affect a population's health	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 8 reading. Salazar LF, Crosby RA, DiClemente RJ. "Health Behavior in the Context of the "New" Public Health." <u>Assessment Opportunity</u> : Quiz on the 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	HSERV 511: Introduction to Health Services and Public Health	<u>Didactic Opportunity</u> : Week 1. Readings for session 1 include Goldstein et al, Introduction to Public Health - Promises and Practices chapter 1 and Public Health 3.0. Lecture will provide additional content relating to social, political, and economic determinants of health. <u>Assessment Opportunity</u> : Week 10. Final paper requires the student to 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	HSMGMT 503: Population Health Management	<u>Didactic Opportunity</u> : Week 10. Readings: The health impacts of globalization: a conceptual framework. Globalization and Health. <u>Assessment Opportunity</u> : Week 10. Poll to explain how globalization affects global burdens of disease.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	HSMGMT 590: Special Topics in Health Services	<u>Didactic Opportunity</u> : Week 5. Explore the ecological perspective linking human, animal, and ecosystem health, and our role as leaders in making this happen. In-class discussion with local healthcare and social responsibility experts in climate change and global health. <u>Assessment Opportunity</u> : Week 10. Submit paper/business proposal regarding sustainability in your organization, including an ecological perspective on the connections among human health, animal health, and ecosystem health.

2) Briefly explain how the school 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.

As with the MS and PhD public health degrees (sections D17.8, D18.8), the CEPC recommended to the departments and programs that they choose one of three options. These were: 1. develop a new course, using the compiled resources for public health degrees or other resources; 2. incorporate the compiled resources into existing courses; or 3. make resources available online and require that students complete assigned modules on their own.

The following table provides details on the options chosen to cover introductory public health knowledge for each individual non-public health degree program.

Program/Degree	Option 1. Created new course	Option 2. Incorporated resources into existing course	Option 3. Made resources available online	Additional option. Content covered in existing courses
Health Informatics and Health Information Management Bachelor of Science	HIHIM 450: Healthcare Delivery and Policy			
Health Informatics and Health Information Management Master's				HIHIM 508: Health Information Management Systems and Leadership HIHIM 525: Healthcare Database and Applications HIHIM 540: Consumer Health Informatics HIHIM 556: Healthcare Quality and Technology HSMGMT 501: Epidemiology/Critical Evidence Appraisal
Master of Health Administration		HSERV 511: Introduction to Health Services and Public Health HSMGMT 503: Population Health Management	HSERV 511: Introduction to Health Services and Public Health HSMGMT 503: Population Health Management	HSMGMT 501: Epidemiology/Critical Evidence Appraisal
Master of Health Administration, Executive			HSMGMT 590: Select Topics in Health Services	HSMGMT 501: Epidemiology/Critical Evidence Appraisal HSMGMT 503: Population Health Management HSERV 511: Introduction to Health Services and Public Health
Nutritional Sciences Food Systems, Nutrition, and Health Bachelor of Arts				NUTR 302: Food Systems: Harvest to Health NUTR 303: Food Systems: Individual to Population Health

- 3) **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.**

Materials included in the Electronic Resource File:

Electronic Resource File\Criterion_D\3. MS_PhD_NonPH D17-19\D19.3.

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

The following non-public health degrees offered by the School of Public Health bring unique strengths and breadth to the undergraduate and graduate student body.

Food Systems, Nutrition, and Health—Nutritional Sciences

Bachelor of Arts (BA)

- Prepares students for these careers:
 - The degree has been designed to address interests and future careers that require the ability to disentangle complex problems and develop interdisciplinary solutions. This major is a liberal arts degree, which is extraordinarily valuable in today's marketplace.
- Unique degree aspects:
 - The new degree was created as a result of a highly successful minor that was popular with students. Graduates will have developed competency in food systems, nutrition, public health, social and economic equity, and sustainability, as well as strong liberal arts preparation in intellectual and practical skills like inquiry, analysis, communication, critical thinking, and problem-solving. Since its inception, SPH has seen enrollment growing steadily.

Health Informatics and Health Information Management—Health Services

Bachelor of Science (BS)

- Prepares students for these careers:
 - Positions as health information managers and supervisors, technicians and specialists, health data and integrity analysts, privacy analysts, and electronic health record system analysts.
- Unique degree aspects:
 - The degree is unique because it prepares students to earn a professional credential, the Registered Health Information Administrator (RHIA), which is a widely recognized and respected national certification. It is one of only around seventy such programs nationwide accredited by the Commission on Accreditation for Health Informatics and Information Management (CAHIM) Education.
 - It is an evening program and delivered in a hybrid format. As a result of the format and scheduling, this program is more accessible to non-traditional students than the "regular" bachelors degrees. This has allowed the program to attract a very diverse student body.

Health Informatics and Health Information Management—Health Services

Master of Science (MS)

- Prepares students for these careers:
 - Graduate students prepare for positions as business analysts, project managers, quality improvement specialists, and information technology specialists in acute and ambulatory care settings, as well as at health technology vendors such as Microsoft and Amazon.
- Unique degree aspects:
 - Its curriculum includes informatics, information technology, information governance, data analytics, and management. This meets the master of health informatics accreditation standards and curricular competencies of the CAHIM.

Health Administration

Master in Health Administration (MHA)

- Prepares students for these careers:
 - Graduates receive the skills and training to serve as leaders within a wide range of health care delivery settings, insurance and health care finance companies, and as consultants to public and private agencies. Alumni work in integrated delivery systems, academic medical centers, and rural hospitals. MHA alumni serve as leaders of ambulatory health care settings as well as conducting strategic and financial analyses at most health care settings in the Pacific Northwest.
- Unique aspects:
 - The MHA program has prepared for students success in this industry since 1973 and has evolved to keep pace with changes in US health over the decades. In the 1970s, there was a greater emphasis on institutional care provided. Now, US health care has shifted to a population health focus with more care provided in outpatient settings. Consequently, the MHA program today provides training that also supports careers in these aspects of US health care. The program remains as the top program in the Pacific Northwest and one of the top programs in the country. Additionally, the program is fully accredited under CAHME (Commission of Accreditation of Healthcare Management Education).

Master in Health Administration, Executive (EMHA)

- Prepares students for these careers:
 - Prepares successful leaders for the next step in their careers leading clinical, strategic, and financial services at organizations, such as the University of Washington Medical Center, the Greater Fairbanks Community Hospital Foundation, the Northwest Kidney Centers, Salem Health, and Seattle Children's Home Care Services.
- Unique aspects:
 - The EMHA program is designed for students that have progressed in their careers to mid-level and leadership positions and typically have ten years of professional experience. The EMHA program is conducted in team-based, in-person class sessions that allow students to continue with their careers while completing their degree. The EMHA program therefore provides all of the benefits of in-person instruction and direct contact with faculty and fellow students without any interruption in their careers. The program is fully accredited under CAHME.

D20. Distance Education

- 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 UW School of Public Health currently provides one degree that is distance education—the Online Master of Public Health (formerly known as the Online Executive Master of Public Health). The program is primarily online with only three sessions during the two-year program required to be in-person in Seattle. Due to the impact of COVID-19, all “in-person” sessions, however, will be held virtually for the foreseeable future.

The program uses both synchronous and asynchronous activities to meet the course learning objectives. Students access their courses via Canvas (an internal UW tool for faculty and students), and interact with a number of different instructional materials. Many courses hold weekly synchronous webinars or office hours.

- 2) Describe the public health distance education programs, including**

- a) an explanation of the model or methods used,**

The methods for this online MPH program are similar to the methods used for the entirety of MPH programs at the UW SPH. Templates have been included within the Criterion D section to display the academic rigor provided to students who choose this program. The School ensures all D1, Foundational Public Health Knowledge competencies, are met within this program; that it provides the appropriate courses needed to obtain knowledge and skills to earn a MPH (see template D2-1 fee-based); and that the program assesses all D2 Foundational competencies within its curriculum as well (see D2-2 fee-based).

This program also adheres to the other MPH requirements with unique competencies (template D4-1 fee-based), the applied practice experience (D5-1), and the integrative learning experience through the student’s choice of completing either a thesis or a capstone project (D7-1).

- b) the school’s rationale for offering these programs,**

This program is offered to allow students who are currently unable to attend school in a traditional setting the flexibility to earn their MPH in the same (or shorter) period of time as they would with an in-person classroom structure. The program schedule still requires six quarters of course work, but given the use of summer quarter, students will typically finish at the end of their second Winter Quarter.

- c) the manner in which it provides necessary administrative, information technology and student support services,**

This degree program is administered through the Department of Health Services within the UW SPH. The department’s student services team provides dedicated staff both to support students and to support the technology needed to administer this program.

Any necessary administrative changes (updates to curriculum or other degree requirements) are managed through the [UW Continuum College](#). This office manages the administrative functions for all UW fee-based programs, as opposed to all state-supported graduate programs that are managed by the UW Graduate School.

- 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, and**

Monitoring academic rigor within this program is conducted in the same way as for all SPH degree programs. The department (in this case, Health Services) curriculum committee reviews the curriculum. Recommendations from the departmental curriculum committee are then reviewed and approved by both the SPH CEPC (Curriculum and Educational Policy Committee) and the UW Curriculum Committee.

Student evaluations are used to monitor and evaluate educational outcomes, format, and methods. This is in the same way that traditional courses use student evaluations to drive program and curriculum changes, paying special attention to potential improvement in the distance-learning format.

- e) the manner in which it evaluates the educational outcomes, as well as the format and methods.**

Monitoring educational outcomes within this program is much the same as all other degree programs within SPH, and follows the same review and approval steps described above in D20.2.d.

- 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.**

Students complete individual projects that require substantial one-on-one communication with faculty and staff. Students work collaboratively with subject matter experts to create plans for experiential learning and culminating products, in a way that allows students to work locally to them while still ensuring SPH faculty get to know the students.

In addition, the registration process for distance education is no different than registration for any other type of course or degree. Students must apply to the program and be accepted in order to register for courses that apply to their program. Internal systems allow appropriate staff to see that all applicable students are registered for required courses and ensure they are able to complete the Online MPH program. Student services staff in Health Services continue to track and manage student progress and follow up with students whenever necessary. In this way, the School can be confident that the student who registers is the same student who completes the work and receives the credit.

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

Strengths

- The Online MPH program format allows SPH to reach students in rural areas, or areas where public health education is not otherwise available. This leads to a diversity of thought, opinion, and expertise in the classroom that contributes to a strong student experience.

Plans for improvement

- Working with students remotely has challenges, including the difficulty in finding experiential learning activities for students remotely, in addition to providing appropriate support for those experiences. The program plans to allocate additional faculty and staff FTE toward expanding community connections, locally and regionally, to ensure sufficient experiential learning opportunities for students. Over the course of 2020-21, the program will also realign its curriculum in preparation for fully integrating online versions of the state-supported MPH Common Core courses (as identified in Criterion D). Instruction for these online courses will be effective for the 2021-22 academic year.

Criterion E

E1. Faculty Alignment with Degrees Offered

- 1) Provide a table showing the school'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.

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
Averill, Michelle	Senior Lecturer	Non-tenure track	PhD	University of Washington	Nutritional Science	Public Health Nutrition
Baker, Marissa	Assistant Professor	Non-tenure track	PhD	University of Washington	Exposure Science	Environmental & Occupational Health
Baquerio, Barbara	Associate Professor	Non-tenure track	PhD	San Diego State University	Health Behavior	Health Services
Baseman, Janet	Professor	Non-tenure track	PhD	University of Washington	Epidemiology	Epidemiology
Bezruchka, Stephen	Senior Lecturer	Non-tenure track	MD	Stanford University	Medicine	Health Services
Browning, Sharon	Research Professor	Non-tenure track	PhD	University of Washington	Statistics	Public Health Genetics
Brumback, Lyndia	Research Associate Professor	Non-tenure track	PhD	University of Wisconsin	Statistics	Biostatistics
Burbacher, Thomas	Professor	Tenured	PhD	University of Washington	Developmental Psychology	Environmental & Occupational Health
Busch Isaksen, Tania	Senior Lecturer	Non-tenure track	PhD	University of Washington	Exposure Science	Environmental & Occupational Health
Campbell, Lee Ann	Professor	Tenured	PhD	Pennsylvania State University	Microbiology	Pathobiology
Cangelosi, Gerard	Professor	Tenured	PhD	University of California, Davis	Microbiology	Environmental & Occupational Health
Carone, Marco	Assistant Professor	Tenure-track	PhD	Johns Hopkins University	Biostatistics	Biostatistics
Cave, Sarah	Senior Lecturer	Non-tenure track	MHA	University of Washington	Health Administration	Health Administration
Chan, Kwun Chuen	Professor	Tenured	PhD	Johns Hopkins University	Biostatistics	Biostatistics
Cherry, Debbie	Associate Professor	Non-tenure track	MD MPH	Texas Tech University Health Sciences Center School of Medicine	Medicine & Occupational Health	Environmental & Occupational Health
Cohen, Marty	Principal Lecturer	Non-tenure track	ScD	Harvard University	Exposure Assessment	Environmental & Occupational Health
Collier, Sarah	Associate Professor	Non-tenure track	PhD	Cornell University	Plant Breeding	Nutritional Sciences
Condon, Jim	Senior Lecturer	Non-tenure track	EdD	Georgia Southern University	Educational Leadership	Health Informatics and Health Information Management
Costa, Lucio	Professor	Tenured	PharmD	University of Milan	Pharmacology	Environmental & Occupational Health
Cui, Julia	Assistant Professor	Tenure-track	PhD	University of Kansas Medical Center	Toxicology	Environmental & Occupational Health
Drake, Alison	Assistant Professor	Non-tenure track	PhD	University of Washington	Epidemiology	Global Health
Drewnowski, Adam	Professor	Non-tenure track	PhD	Rockefeller University	Psychology	Epidemiology
Easterberg, Charles	Lecturer	Non-tenure track	MS	University of Minnesota	Environmental Health	Environmental & Occupational Health
Ebi, Kristie	Professor	Non-tenure track	PhD, MPH, MS	University of Michigan, University of Michigan, Massachusetts Institute of Technology	Epidemiologic Science, Epidemiology, Toxicology	Global Health
Edwards, Todd	Associate Professor	Non-tenure track	PhD, MA	Claremont Graduate University, Claremont Graduate University	Applied Social Psychology, Applied Social Psychology	Health Services
Emond, Mary	Research Associate Professor	Non-tenure track	PhD, MS	University of Washington, University of Washington	Biostatistics, Biostatistics	Biostatistics
Enquobahrie, Daniel	Associate Professor	Non-tenure track	MD, PhD, MPH	Addis Ababa University, University of Washington, University of Washington	Medicine (MD), Epidemiology, Epidemiology	Epidemiology
Errett, Nicole	Lecturer	Non-tenure track	PhD, MSPH	Johns Hopkins University, Johns Hopkins University	Health and Public Policy, Health Policy	Environmental & Occupational 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
Faustman, Elaine	Professor	Tenured	PhD	Michigan State University	Toxicology	Environmental & Occupational Health
Fishman, Paul	Professor	Non-tenure track	PhD, MA, MA	University of Washington, American University, University of Washington	Economics, Economics, Economics	Health Administration
Fleming, Thomas	Professor	Non-tenure track	PhD, MA	University of Maryland, University of Maryland	Statistics, Statistics	Biostatistics
Fohner, Alison	Assistant Professor	Non-tenure track	PhD, MS	University of Washington, Stanford University	Public Health Genetics, Biology	Public Health Genetics
Fretts, Mandy	Assistant Professor	Non-tenure track	PhD, MPH	University of Washington, University of Washington	Epidemiology, Epidemiology	Epidemiology
Gakidou, Emmanuela	Professor	Non-tenure track	PhD, MSc	Harvard University, Harvard School of Public Health	Health Policy, International Health Economics	Global Health
Gallagher, Evan	Professor	Tenured	PhD, MEM	Duke University, Duke University	Biochemical Toxicology, Ecotoxicology and Environmental Chemistry	Environmental & Occupational Health
Ganti, Anjulie	Senior Lecturer	Non-tenure track	MPH, MSW	Columbia University, University of Washington	Recreation Administration,	Public Health-Global Health
Garrison, Michelle	Associate Professor	Non-tenure track	PhD, MPH	University of Washington, University of Washington	Epidemiology, Epidemiology	Health Services
Gleason, Richard	Lecturer	Non-tenure track	MSPH	University of Washington	Industrial Hygiene and Safety	Environmental & Occupational Health
Gloster, Anne-Marie	Lecturer	Non-tenure track	PhD, MPH	North Carolina State University, University of North Carolina (Chapel Hill)	Educational Leadership, Policy Analysis, Nutrition	Public Health Nutrition
Gloyd, Steve	Professor	Tenured	MD, MPH	University of Chicago, Harvard University	Family Practice Medicine, Health Policy and Management	Global Health
Graham, Susan	Associate Professor	Non-tenure track	PhD, MD, MPH	University of Toronto, McGill University, Boston University	Clinical Epidemiology, CM, Health Services	Global Health
Guthrie Brandon	Assistant Professor	Non-tenure track	PhD, MPH	University of Washington, University of Washington	Epidemiology, Epidemiology	Epidemiology
Hagopian, Amy	Professor	Non-tenure track	PhD, MHA	University of Washington, University of Washington	Health Services, Health Administration	Health Administration
Hajat, Anjum	Assistant Professor	Non-tenure track	PhD, MPH	University of North Carolina, University of Michigan	Epidemiology, Epidemiology, International Health	Epidemiology
Hannon, Peggy	Professor	Tenured	PhD, MPH	University of North Carolina, University of North Carolina	Social Psychology, Public Health	Health Services
Harris, Cristen	Senior Lecturer	Non-tenure track	PhD, MS	Florida International University, University of Miami	Nutrition & Dietetics, Exercise Physiology	Nutritional Sciences
Harris, Jeff	Professor	Tenured	MD, MPH, MBA	University of Texas (Southwestern), Johns Hopkins University, University of Washington	Medicine, Public Health	Health Services
Hawes, Stephen	Professor	Non-tenure track	PhD, MS	University of Washington, University of Washington	Epidemiology, Biostatistics	Epidemiology

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Heffron, Renee	Associate Professor	Non-tenure track	PhD, MPH	University of Washington, Tulane University	Epidemiology	Epidemiology
Hernandez Prado, Bernardo	Associate Professor	Non-tenure track	DSc, MS	Harvard University, University of London	Health & Social Behavior, Social Psychology	Global Health
Hughes, James	Professor	Non-tenure track	PhD, MS	University of Washington, University of Washington	Statistics, Biomathematics	Biostatistics
Hurley, Christine	Clinical Assistant Professor	Non-tenure track	MHA	University of Washington	Health Service Administration & Planning	Health Services
Inoue, Lurdes	Professor	Tenured	PhD, MS, MS	Duke University, University of Sao Paulo (Brazil), Duke University	Statistics, Statistics, Statistics	Biostatistics
Jones-Smith, Jessica	Associate Professor	Non-tenure track	PhD, MPH	University of North Carolina (Chapel Hill), University of California (Berkeley)	Nutritional Epidemiology, Public Health Nutrition	Nutritional Sciences
Kaelin, Carrie	Senior Lecturer	Non-tenure track	MHA	University of Washington	Health Administration	Health Informatics and Health Information Management
Katz, Aaron	Extension Lecturer	Non-tenure track	CPH	University of Toronto (Canada)	Public Health	Health Services
Kavanagh, Terrance	Professor	Tenured	PhD, MS	Michigan State University, Michigan State University	Environmental Toxicology and Genetics, Physiology	Environmental & Occupational Health
Kerr, Kathleen	Professor	Tenured	PhD, MA, MS	University of California Los Angeles, University of California Los Angeles, University of California Los Angeles	Statistics, Mathematics, Statistics	Biostatistics
Kessler, Larry	Professor	Tenured	ScD	Johns Hopkins University	Health Services Admin	Health Services
Khosropour, Christine	Assistant Professor	Non-tenure track	PhD, MPH	University of Washington, Emory University	Epidemiology, Epidemiology	Epidemiology
Kirk, Liz	Senior Lecturer	Non-tenure track	PhD	University of Washington	Nutritional Science	Food Systems, Nutrition, and Health
Ko, Linda	Associate Professor	Non-tenure track	PhD, MPH, MS	University of North Carolina, University of Texas(EI Paso), Boston University	Health Education, Health Behavior, Epidemiology	Health Services
Kopjar, Branko	Associate Professor	Non-tenure track	MD, PhD, MS	University of Zagreb (Yugoslavia), University of Oslo (Norway), University of Zagreb (Yugoslavia)	Internal Medicine, Epidemiology, Biostatistics	Health Services
Kratz, Mario	Research Associate Professor	Non-tenure track	MSc, PhD	University of Bonn (Germany)	Nutritional Science	Nutritional Sciences
Krishnaswamy, Gita	Senior Lecturer	Non-tenure track	MPH, MEd	University of Washington, DePaul University	Health Services, Secondary Teaching Certification	Health Services
Lane, Jeff	Assistant Professor	Non-tenure track	JD, MPH	University of Washington, University of Washington	Health Policy	Global Health
Lila, Eardi	Assistant Professor	Tenure-track	PhD, BS/MSc	University of Cambridge, UK.	Statistics, Mathematical Engineering	Biostatistics
Lindstroem, Sara	Assistant Professor	Non-tenure track	PhD, MSc	Umea University, Umea University	Genetic Epidemiology, Engineering Physics	Public Health Genetics

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Lingappa, Jaisri	Professor	Tenured	MD, PhD	University of Massachusetts, Harvard University	Internal Medicine, Cell Biology	Pathobiology
Lund, Anne	Senior Lecturer	Non-tenure track	MPH	University of Washington	Nutrition	Public Health Nutrition
Lund, Jennifer	Associate Professor	Non-tenure track	PhD, MS	Yale University, Yale University	Immunobiology, Immunobiology	Pathobiology
Mackenzie, Sara	Principal Lecturer	Non-tenure track	MD, MPH	University of California (Davis), University of Washington	Medicine, Public Health	Public Health-Global Health
Manhart, Lisa	Professor	Non-tenure track	PhD, MPH	University of Washington, Tulane University	Epidemiology, International Health & Development	Epidemiology
May, Susanne	Professor	Non-tenure track	PhD, MS	University of Massachusetts, Universitat Karlsruhe	Biostatistics, Mathematics	Biostatistics
McGrath, Christine	Assistant Professor	Non-tenure track	PhD, MPH	University of Washington, University of North Texas Health Science Center	Epidemiology, Epidemiology	Global Health
McKnight, Barbara	Professor	Tenured	PhD, MS	University of Wisconsin, University of Wisconsin	Statistics, Statistics	Biostatistics
Meischke, Hendrika	Professor	Tenured	PhD, MPH	Michigan State University, University of Michigan	Mass Communication, Family Planning, Health Behavior, Health Promotion, International Health	Health Services
Meschke, John Scott	Professor	Tenured	JD, PhD, MS	University of Kansas, University of North Carolina, Indiana University	Law, Environmental Sciences and Engineering, Environmental Science	Environmental & Occupational Health
Mooney, Steve	Assistant Professor	Non-tenure track	PhD, MS	Columbia University, Columbia University	Epidemiology, Epidemiology	Epidemiology
O'Brien, Kurt	Senior Lecturer	Non-tenure track	MHRD	University of San Francisco	Human Resource, Organizational Development	Health Administration
O'Malley, Gabrielle	Associate Professor	Non-tenure track	PhD, MA	University of Washington, Johns Hopkins University	Anthropology, Social Change and Development	Epidemiology
Ornelas, India	Associate Professor	Tenure-track	PhD, MPH	University of North Carolina, University of Washington	Health Education, Health Behavior, Health Services	Health Services
Otten, Jennifer	Associate Professor	Non-tenure track	PhD, MS	University of Vermont, Tufts University	Animal, Nutrition, and Food Sciences, Nutrition Communications	Food Systems, Nutrition, and Health
Pavlinac, Patricia	Assistant Professor	Non-tenure track	PhD, MS	University of Washington, University of Washington	Epidemiology, Epidemiology	Global Health
Perrone, Lucy	Assistant Professor	Non-tenure track	PhD, MSPH	University of Texas (Galveston), Tulane University	Infectious Disease Pathology, Tropical Medicine & Hygiene	Global Health
Peterson, Kathleen	Senior Lecturer	Non-tenure track	MS	Central Michigan University	Health Services Admin	Health Informatics and Health Information Management

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Petrescu-Prahova, Miruna	Senior Lecturer	Non-tenure track	PhD, MA	University of California (Irvine), University of Bucharest	Sociology, European Social Policy	Health Services
Pfeiffer, James	Professor	Non-tenure track	PhD, MPH, MA	University of California Los Angeles, University of California Los Angeles, University of California Los Angeles	Anthropology, Community Health Services, Anthropology	Global Health
Phipps, Amanda	Associate Professor	Non-tenure track	PhD, MPH	University of Washington, University of California (Berkeley)	Epidemiology, Epidemiology	Epidemiology
Puttkammer, Nancy	Associate Professor	Non-tenure track	PhD, MPH	University of Washington, University of California (Berkeley)	Health Services, Community Health Education	Global Health
Rabinowitz, Peter	Professor	Tenured	MD, MPH	University of Washington, Yale University	Medicine, School of Medicine	Environmental & Occupational Health
Rao, Deepa	Professor	Non-tenure track	PhD, MA	Illinois Institute of Technology, University of Chicago	Clinical Psychology, Social Science	Global Health
Rice, Kenneth	Professor	Tenured	PhD	Cambridge University (UK)	Biostatistics	Biostatistics
Roberts, Marilyn	Professor	Non-tenure track	PhD, MS	University of Washington, University of Washington	Microbiology, Microbiology	Environmental & Occupational Health
Rowhani-Rabhar, Ali	Associate Professor	Non-tenure track	MD, PhD, MPH	Mashhad University of Medical Sciences (Iran), University of Washington, Yale University	Medicine, Epidemiology, Epidemiology	Epidemiology
Sadnle, Mauricio	Assistant Professor	Tenure-track	PhD	Carnegie Mellon University	Statistics	Biostatistics
Schwartz, Stephen	Professor	Non-tenure track	JD	Yale University	Epidemiology	Epidemiology
Sconyers, Jeff	Senior Lecturer	Non-tenure track	JD	Yale University	Law	Health Administration
Seixas, Noah	Professor	Tenured	PhD, MS	University of Michigan, Harvard University	Industrial Hygiene, Industrial Hygiene	Environmental & Occupational Health
Seto, Edmund	Associate Professor	Tenure-track	PhD, MS	University of California (Berkeley), University of California (Berkeley)	Environmental Health Sciences, Environmental Health Sciences	Environmental & Occupational Health
Sheppard, Lianne	Professor	Tenured	PhD, MSc	University of Washington, Johns Hopkins University	Biostatistics, Biostatistics	Environmental & Occupational Health
Sherr, Kenny	Professor	Non-tenure track	PhD, MPH	University of Washington, University of Washington	Epidemiology, Health Services	Global Health
Shojaie, Ali	Associate Professor	Tenure-track	PhD, MS, MS, MS, MSc	University of Michigan, University of Michigan, University of Michigan, Michigan State University, Amirkabir University	Statistics, Human Genetics, Applied Math, Statistics, Industrial Engineering	Biostatistics
Simon, Noah	Associate Professor	Tenure-track	PhD	Stanford University	Statistics	Biostatistics
Simpson, Christopher	Professor	Tenured	PhD, MSc	University of British Columbia (Canada), University of Waikato	Chemistry, Chemistry	Environmental & Occupational Health
Sipos, Yona	Lecturer	Non-tenure track	PhD, MSc	University of British Columbia (Canada), University of British Columbia (Canada)	Integrated Studies in Land & Food Systems	Food Systems, Nutrition, and Health
Slyker, Jennifer	Associate Professor	Non-tenure track	PhD, MS	Oxford University, Oxford University	Immunology, Biology	Public Health-Global Health

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Smith, Nicholas	Professor	Non-tenure track	PhD, MPH	University of Washington, University of California (Berkeley)	Epidemiology, Epidemiology/Biostatistics	Epidemiology
Soge, Olusegun O.	Assistant Professor	Non-tenure track	PhD, MSc	University of Ibadan, University of Ibadan	Pharmaceutical Microbiology, Pharmaceutical Microbiology	Pathobiology
Spector, June	Associate Professor	Tenure-track	MD, MPH	Yale University, Johns Hopkins University	Medicine (MD), Epidemiology/Biostatistics	Environmental & Occupational Health
Spice, Carolin	Senior Lecturer	Non-tenure track	MS	University of Washington	Clinical Informatics and Patient-centered Technologies	Health Informatics and Health Information Management
Spigner, Clarence	Professor	Tenured	DrPH, MPH	University of California (Berkeley), University of California (Berkeley)	Behavioral Science, Behavioral Science	Health Services
Stanaway, Jeffrey	Assistant Professor	Non-tenure track	PhD, MPH	University of Washington, University of Arizona	Epidemiology, Family & Child Health	Epidemiology
Stillman, Dennis	Senior Lecturer	Non-tenure track	MHA	University of Washington	Health Svc/bus Admin	Health Administration
Szpiro, Adam	Associate Professor	Non-tenure track	PhD	Brown University	Applied Math	Biostatistics
Thomasgard (Huebner), Colleen	Professor	Non-tenure track	MPH, PhD, BS	University of Washington	Epidemiology, Developmental Psychology, Psychology	Epidemiology
Thornton, Tim	Associate Professor	Tenure-track	PhD	University of Chicago	Statistics	Public Health Genetics
Turner, Anne	Professor	Tenured	MD, MLIS, MPH	Brown University, University of Washington, University of Washington	Medicine, Information Sciences, Health Services, Medical Informatics	Health Services
Vander Stoep, Ann	Professor	Non-tenure track	MS, PhD	University of Oklahoma, University of Washington	Epidemiology	Health Services
Wagenaar, Brad	Associate Professor	Non-tenure track	PhD, MPH	University of Washington, Emory University	Epidemiology, Global Epidemiology	Epidemiology
Wakefield, Jon	Professor	Tenured	PhD	University of Nottingham	Statistics	Biostatistics
Weiner, Bryan	Professor	Tenured	PhD, MA	University of Michigan, University of Michigan	Organizational Psychology, Organizational Psychology	Global Health
Weir, Bruce	Professor	Tenured	PhD	North Carolina State University	Genetics, Statistics	Public Health Genetics
Weiss, Noel	Professor	Tenured	MD, DrPH, MPH	Stanford University, Harvard University, Harvard University	Medicine, Epidemiology	Epidemiology
Willis, Amy	Assistant Professor	Tenure-track	PhD	Cornell University	Statistics	Biostatistics
Winer, Rachel	Professor	Non-tenure track	PhD, MPH	University of Washington, University of Washington	Epidemiology, Epidemiology	Epidemiology
Witten, Daniela	Professor	Tenured	PhD, MS	Stanford University	Statistics	Biostatistics
Wood, Suzanne	Assistant Professor	Non-tenure track	PhD, MS	Old Dominion University, Old Dominion University	Business Administration, Community Health	Health Administration
Xia, Zhengui	Professor	Tenured	PhD, MS	University of Washington, Wuhan University (China)	Pharmacology, Biochemistry	Environmental & Occupational Health
Yost, Mike	Professor	Tenured	PhD, MS	University of California (Berkeley), University of California (Berkeley)	Environmental Health, Environmental Health	Environmental & Occupational Health

- 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.

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
Baesler, Wendy	Clinical Assistant Professor	Part-time Lecturer, School of Business	37% for 1 quarter	PhD, Macc	Brigham Young University, University of Washington	Accounting	Health Administration
Bansal, Aasthaa	Associate Professor	Associate Professor, Pharmacy	16%	PhD, MS	University of Washington	Biostatistics	Biostatistics
Barnabas, Ruanne	Associate Professor	Associate Professor, Global Health	37% for 1 quarter	DPhil, MSc, MBChB	University of Oxford, University of Oxford, University of Cape Town	Clinical Medicine - Epidemiology, Epidemiology, Medicine & Surgery	Epidemiology
Barrington, Wendy	Associate Professor	Associate Professor, Nursing	37% for 1 quarter	MPH, PhD	University of Washington	Epidemiology	Epidemiology
Basu, Anirban	Professor	Professor, Pharmacy; Director, CHOICE Institute, UW	37% for 1 quarter	PhD MS	University of Toledo, University of North Carolina (Chapel Hill), University of Chicago	Pharmaceutical Sciences, Biostatistics, Health Economics	Health Services
Bell, Katie	Clinical Assistant Professor	Principal, Katie Bell Consulting	57% for 1 quarter	MBA, MHA	University of Pittsburg	Business Administration, Health Service Administration	Health Services
Benki, Sarah	Clinical Assistant Professor	Clinical Assistant Professor, Global Health	80%	PhD, MS	University of Washington, University of Washington	Microbiology, Epidemiology	Global Health
Bissey, Jeffrey	Clinical Assistant Professor	Interim Executive Director, Seattle Children's Care Network. Executive Director for Partnerships, Seattle Children's Hospital	37% for 1 quarter	MD, MHA	University of Washington	Medicine, Health Service Administration	Health Administration
Blue, Elizabeth	Associate Professor	Associate Professor, School of Medicine	16%	PhD, MS	University of Utah	Anthropology	Biostatistics
Bogan, Sharon	Affiliate Instructor	Communications Specialist, Public Health Seattle & King County	29% for 1 quarter	MPH	University of Washington	Public Health	Health Services
Bowen, Deb	Professor	Professor, School of Medicine	10%	PhD	Mount Holyoke College, Uniformed Services University of the Health Sciences	Psychology, Biochemistry, Health Psychology	Public Health Genetics
Bumgarner, Roger	Associate Professor	Associate Professor, School of Medicine	50%	PhD	University of Arizona	Chemistry	Environmental and Occupational Health
Campbell, Nancy	Clinical Assistant Professor	Principal, Campbell Consulting	37% for 1 quarter	MA	State University of New York	Criminal Justice	Pathobiology
Chaudhari, Van	Clinical Assistant Professor	Administrative Director, Care Management and Population Health, University of Washington	13% for 1 quarter	MHA, MBA	University of Ottawa	Health Service Administration, Business Administration	Health Administration
Chayet, Elise	Clinical Instructor	Director of External Communication, Harborview Medical Center	19% for 1 quarter	MHA	University of Washington	Health Service Administration	Health Services
Chu, Helen	Assistant Professor	Assistant Professor, School of Medicine	37% for 1 quarter	MPH, MD	University of Washington, Duke University Medical Center	Epidemiology, Medicine	Epidemiology
Cook, Andrea	Affiliate Profesor	Senior Investigator, KPW	16%	PhD, MS	Harvard University	Biostatistics	Biostatistics
Cromwell, Elizabeth	Assistant Professor	Assistant Professor, IHME	37% for 1 quarter	PhD, MPH	University of North Carolina at Chapel Hill, Emory University	Epidemiology, Global Health	Global 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
Croteau, Gerald	N/A	Research Industrial Hygienist	20% for 1 quarter	MS	University of Washington	Industrial Hygiene	Environmental and Occupational Health
Daniell, Bill	Associate Professor	Professor Emeritus	33% for 1 quarter	MPH, MD, BA	University of Washington, Tufts University, University of California	Occupational Medicine, medicine, biology	Health Services
Dannenberg, Andrew	Affiliate Profesor	Affiliate Professor	60% for quarter teaching	MD, MPH	Stanford University School of Medicine, Johns Hopkins School of Hygiene and Public Health	Medicine, Public Health	Environmental and Occupational Health
Denno, Donna	Professor	Professor, School of Medicine	37% for 1 quarter	MD, MPH	University of Michigan, University of Washington	Medicine, International Health	Global Health
Dorsch, Anthony	Clinical Instructor	Executive Dierctor, UW Physicians	37% for 1 quarter	MHA, MBA	Univeristy of Washington	Health Service, Business Admin	Health Administration
Dugan, Jerome	Assistant Professor	Assistant Professor	100%	PhD, MA	Rice University	Economics	Health Administration
Duran, Bonnie	Professor	Director, Center for Indigenous Health Research, UW	37% for 1 quarter	PhD, MPH	University of California (Berkeley)	Health Education	Health Services
Edlund, Penelope Anne	Clinical Assistant Professor	Clinical Assistant Professor	74% for 1 quarter	MBA, BN	Pepperdine, University of Toronto	Business Administration, Nursing	Health Administration
Etzioni, Ruth	Affiliate Profesor	Fred Hutchinson Cancer Research Center	16%	PhD, MS	Carnegie Mellon University	Statistics	Health Services
Farquhar, Carey	Professor	Professor, Global Health	100%	MD, MPH	Harvard Medical School, University of Washington	Medicine, Public Health	Global Health
Farquhar, Stephanie	Clinical Professor	Clinical Professor	93%	PhD, MA	University of Michigan, University of Colorado (Boulder)	Health Behavior, Health Education, Medical Anthropology	Public Health-Global Health
Finnegan, Brad	Clinical Instructor	Founder & CEO, Cascadia Strategies, Inc	4% for 1 quarter	PhD, MPP	The George Washington Univeristy	Health Policy, Health Policy	Health Services
Firth, Molly	Clinical Instructor	Principal MCG Consulting	50%	MPH	Tufts University	Public Health	Health Services
Fitzpatrick, Annette	Research Professor	Research Professor, School of Medicine	37% for 2 quarters	MA, PhD	Southern Illinois University	Zoology, Epidemiology	Epidemiology
Fliss, Mary	Clinical Instructor	Director of Clinical Services & Operations, Washington State Healthcare Authority	30% for 1 quarter	MHA	University of Minnesota	Health Service Administration	Health Services
Gardner, Victoria	Clinical Assistant Professor	Assistant Dean, School of Public Health	30% for 1 quarter	EdD, MA, BA	University of Washington, University of Washington, University of the Philippines	Educational Leadership and Policy Studies, Educational Communications, Communications	Health Services
Giacani, Lorenzo	Associate Professor	Associate Professor, School of Medicine	37% for 1 quarter	PhD	University of Bologna	Medical Biotechnology	Pathobiology
Gogarten, Jenny	Lecturer	Lecturer	50%	MSc, A.B	University of Washington, University of Chicago	Genome Sciences, Biological Sciences	Public Health Genetics
Goldbaum, Gary	Associate Professor	Associate Professor Emeritus	37% for 1 quarter	MPH, MD	University of Washington, University of Colorado	Epidemiology, Preventative Medicine	Epidemiology
Green-Shook, Sheila	Clinical Instructor	Compliance Specialist, School of Medicine	37% for 1 quarter	MA	University of Minnesota	Health Service Administration	Health Informatics and Health Information Management
Grundner, Christoph	Associate Professor	Associate Professor, School of Medicine	6%	PhD, MS	Heidelberg University, Humboldt University	Molecular Biology	Pathobiology
Haas, Phillip	Clinical Associate Professor	Clinical Associate Professor	37% for 2 quarters	MBA	University of Chicago	Business Administration	Health Services
Hartfield, Karen	Clinical Assistant Professor	Manager HIV/STD program, Public Health-Seattle & King County	38% for 1 quarter	MPH	University of North Carolina (Chapel Hill)	Maternal & Child Health	Health Services
Hartgraves, John	Senior Lecturer	Independent Healthcare Consultant	50%	MHIHIM	University of Washington	Health Informatics and Health Information Management	Health Informatics and Health Information Management
Hawkins, Vivian	Affiliate Assistant Professor	Clinical Quality Specialist, UW Medicine	37% for 1 quarter	MS, PhD	University of Washington	Epidemiology, Molecular and Cellular Biology	Epidemiology
Heim, Joseph	Clinical Instructor	Research Scientist, Engineering	22% for 2 quarters	PhD, MSIE, MECS	Purdue University, University of Louisville	Industrial Engineering, Mathematics, Computer Science	Health Administration
Hennessey, Seth	Clinical Instructor	Assistant Administrator, UW Medicine	37% for 1 quarter	MHA	University of Washington	Health Service Administration	Health Informatics and Health Information Management
Hess, Jeremy	Associate Professor	Associate Professor, School of Medicine	25%	MD MPH	Emory University School of Medicine (MD & MPH)	Medicine/Emergency Medicine/Public Health	Environmental and Occupational Health
Hybiske, Kevin	Associate Professor	Associate Professor, School of Medicine	50%	PhD	University of California Berkeley	Molecular and Cell Biology	Pathobiology

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Kanter, Evan	Clinical Assistant Professor	Psychiatrist, Asian Counseling and Referral Service & Consejo Counseling and Referral Service	37% for 1 quarter	PhD, MD	University of Wisconsin	Medicine, Neuroscience	Health Services
Karasz, Hilary	Affiliate Assistant Professor	Public Information Officer and Program Manager, Public Health, Seattle King County	57% for 2 quarters	PhD, MA	University of Washington, San Francisco State University	Communications, Communications	Health Services
Katz, David	Acting Assisant Professor	Acting Assistant Professor	50%	PhD, MPH	University of Washington, University of Washington	Epidemiology, Epidemiology	Epidemiology
Kim, H. Nina	Associate Professor	Associate Professor, School of Medicine	33% for 1 quarter	MD, MSc	University of California San Francisco, University of Washington	Medicine, Epidemiology	Global Health
Kissel, John	Professor	Professor Emeritus	60% for 1 quarter	PhD	Stanford University	Civil Engineering	Environmental and Occupational Health
Kooperberg, Charles	Affiliate Profesor	Fred Hutchinson Cancer Research Center	16%	PhD, MA	University of California, Berkeley	Statistics, Mathematics	Biostatistics
Lessler, Daniel	Clinical Professor	Senior Vice-President, Clinical Leadership, Comagine Health	4% for 1 quarter	MD, MHA	Stanford University, University of Washington	Medicine, Health Service Administration	Health Services
Liljenquist, Kendra	Assistant Professor	Assistant Professor, School of Medicine	33% for 1 quarter	PhD, MPH	University of Washington, Boston University	Rehabilitation Science, Global Health	Health Services
Littman, Alyson	Research Associate Professor	Research Associate Professor	22%	MPH, PhD	University of Washington	Public Health in Epidemiology, Philosophy in Epidemiology	Epidemiology
Madeleine, Margaret	Research Associate Professor	Research Associate Professor	33% for 1 quarter	MPH, PhD	Yale University, University of Washington	Epidemiology	Epidemiology
Malte, Robert	Clinical Associate Professor	CEO, Evergreen Health	60%	MBA	University of Chicago	Business Administration	Health Services
Manci, Lloyd	Research Associate Professor	Research Associate Professor, School of Dentistry	40%	PhD, MS	University of Washington	Biostatistics	Biostatistics
Mastrangelo, Christina	Associate Professor	Associate Professor, Department of Industrial & Systems Engineering	6%	PhD, Ms	Arizona State University	Insudtrial Engineering, Industrial Engineering	Health Administration
Mastroianni, Anna	Professor	Professor of Law	33% for 1 quarter	JD, MPH	University of Pennsylvania, University of Pennsylvania Law, University of Washington	Spanish, Portuguese, Economics, International Business, Law, Public Health	Public Health Genetics
Masuda, David	Lecturer	Lecturer, School of Medicine; Adjunct Lecturer, School of Nursing	14% for 9 months	MSc	The University of Wisconsin	Administrative Medicine	Health Services
Mazengia, Eyob	Affiliate Assistant Professor	Affiliate Assistant Professor	33% for 1 quarter	PhD, MA	University of Washington		Health Services
Merlino, Daniel	Clinical Assistant Professor	Principal ECG Mangement Consultants	25% for 1 quarter	MBA	University of California	Organizational Design	Health Administration
Morin, Cory	Acting Assisant Professor	Acting Assistant Professor, Global Health	100%	PhD, MA	University of Arizona, University of Arizona	Geography, Geography	Environmental and Occupational Health
Niessen, Brett	Affiliate Instructor	Training Manager, Cardea Services	36% for 1 quarter	MPH	University of Washington	Public Health Practice	Health Services
Nkyekyer, Esi	Acting Assistant Professor	Acting Assistant Professor, School of Medicine	36% for 1 quarter	MD, MPH	Yale School of Medicine, University of Washington	Medicine, Occupational Health	Environmental and Occupational Health
Norouzi, Roxanne	Clinical Instructor	Deputy Dierctor, Director of Education & Integration Policy, One America, Seattle	33% for 1 quarter	MSW	University of Washington	Social Work	Health Services
Ogata, Beth	Lecturer	Nutritionist, School of Medicine	17%	MS	University of Washington	Nutrition	Nutritional Sciences
Painter, Ian	Clinical Assistant Professor	Biostatician, Foundation for Health Care Quality	31%	PhD, MSc	University of Washington, University of Auckland(New Zealand)	Mathematics, Statistics	Health Services
Pel, Dalin	Clinical Instructor	Senior Privacy Consultant, Kaiser Permanente	37% for 1 quarter	MHA	University of Washington	Health Service Administration	Health Administration
Pollet, Gerald	Clinical Instructor	Executive Director, Heart of America Northwest and Heart of America Northwest Research Center	57% for 1 quarter	JD	University of Washington	Law	Health Services

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
Rajagopal, Lakshmi	Professor	Professor, School of Medicine	50%	PhD, MSc	Jawaharlal Nehru University, Madurai Kamaraj University	Life Sciences, Biotechnology	Pathobiology
Randall, Ian	Clinical Assistant Professor	Senior Strategy Advisor, Washington Association for Community Health	37% for 2 quarters	PhD, MHA	University of Michigan	Health Services Research, Health Services Administration	Health Administration
Rhew, Isaac	Research Associate Professor	Research Associate Professor, School of Medicine	37%	MPH, PhD	University of Washington	Epidemiology	Epidemiology
Rivin, Beth	Clinical Associate Professor	Clinical Associate Professor, Global Health	26%	MD, MPH	East Carolina University, Harvard University	Medicine, Public Health	Global Health
Ronen, Keshet	Clinical Assistant Professor	Research Scientist, Global Health	100%	PhD, MPH	University of Pennsylvania, University of Washington	Cell & Molecular Biology, Epidemiology	Global Health
Roxby, Alison	Assistant Professor	Assistant Professor, School of Medicine	37%	MD, MSc	University of North Carolina, London School of Hygiene & Tropical Medicine	Medicine, Public Health	Global Health
Sanford, Sallie	Associate Professor	Associate Professor, School of Law	30%	JD	University of California, Los Angeles	Law	Health Administration
Schauer, Gillian	Clinical Instructor	Principal, Gillian Schauer Consulting; Guest Researcher and senior consultant, Office on Smoking & Health, CDC Seattle; Co-Director Tobacco Studies Program, UW	3% for 1 quarter	PhD, MPH	Emory University, University of Washington	Behavioral Sciences, Health Education, Health Science	Health Services
Simon, Judy	Clinical Instructor	Registered Dietician, UW Medicine	12%	MS	University of Illinois	Community Health Education	Nutritional Sciences
Stergachis, Andy	Professor	Professor, Pharmacy	37%	PhD, MS	University of Minnesota, University of Minnesota	Social & Administrative Pharmacy, Pharmacy Administration	Global Health
Townes, David	Professor	Professor, School of Medicine	10%	MD, MPH	University of Massachusetts, University of Illinois	Medicine, Health Policy & Administration	Global Health
Treser, Charles	Principal Lecturer	Principal Lecturer Emeritus	60% for 1 quarter	MPH	University of Michigan	Environmental and Industrial Health	Environmental and Occupational Health
Unger, Jennifer	Assistant Professor	Assistant Professor, School of Medicine	37%	MD, MPH	University of Connecticut, University of Connecticut	Medicine, Medicine	Global Health
Vega, Fernando	Clinical Assistant Professor	Clinical Assistant Professor, School of Medicine	49% for 2 quarters	MD	University of Washington	Medicine	Health Informatics and Health Information Management
Wasserheit, Judith N.	Professor	Chair, Global Health	100%	MD, MPH	Harvard Medical School, John Hopkins University	Medicine, Epidemiology	Global Health
West, Edward	Clinical Assistant Professor	PMO Administrator & Program Manager, Health Intelligence & Data Solutions, Providence St. Joseph Healthcare Swedish Medical Group	37% for 2 quarters	MS, MHA	John Hopkins University, University of Minnesota	Organizational Development, Health Service Administration	Health Administration
Wheat, Eli	Lecturer	Lecturer, Environmental Studies, College of the Environment	25%	PhD	University of Washington	Biology	Nutritional Sciences
White, Ken	Clinical Assistant Professor	Clinical Assistant Professor	51% for 2 quarters	PhD, MHA	University of California, University of Washington	Health Planning, Health Service Administration	Health Administration
Wijsman, Ellen	Professor	Professor, School of Medicine	16%	PhD	University of Wisconsin	Genetics	Biostatistics
Wortman Morris, Rachel	Clinical Assistant Professor	Business Program Manager, Worldwide Learning, Microsoft	37% for 1 quarter	Ph.D, MA	Ohio State University, Middlebury College	Comparative Studies, English	Health Administration
Yamamoto, Britt	Clinical Associate Professor	Clinical Associate Professor, Global Health	15%	PhD, MS	University of Washington, University of California	Geography, Community Development	Health Services

3) Include CVs for all individuals listed in the templates above.

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_E\E1.3.

4) If applicable, provide a narrative explanation that supplements reviewers' understanding of data in the templates.

As was indicated in Criterion C2, there are 151 faculty with full appointments, primary in SPH; 130 of which are active in teaching one or more of the degree concentrations at the bachelors, masters, or doctoral levels. The latter are referred to here as "Primary Instructional Faculty" (PIF). As with all faculty, each faculty member is appointed to a department (or holds a joint appointment in more than one department) that is most suited to their academic training, research interests, experience, and area(s) of knowledge. The PIF includes both regular and research faculty who contribute to the educational mission of the School.

Departments and programs evaluate the alignment of their PIF with the education needs of the concentration on an annual basis, during Spring Quarter. Qualification for instruction is determined through review of faculty prior training, teaching experience, practice experience, research, and field experience. Departments review their faculty for their scholarship and academic impact trajectory. The process of annual review involves the program and department faculty of higher rank, and begins in Winter Quarter. The review informs the meeting of each faculty member with their department chair. Based on UW Faculty Code, assistant professors have annual review meetings with their chair, and associate and full professors have those meetings every two or three years.

Each department and program within the School is responsible for identifying the need for additional qualified instructional faculty that have expertise in alignment with the substantive or methodological area, and with students learning needs. Priority areas are identified at regular updates of the department and program strategic plan and are re-evaluated annually. School-wide priorities are identified in part from department or program nominated priorities in a series of discussions between department chairs and the Dean. In sum, the development of a unified hiring plan for new faculty is a multi-step process.

Interdisciplinary programs at the School level have some faculty in their core teaching that hold primary appointments outside SPH, or have joint appointments between a department in SPH and another school or college. These faculty have been included in non-PIF tables, and noted in the corresponding tables in Criterion C in non-PIF counts. Specifically in the Public Health Genetics program, two senior faculty with primary appointments outside of SPH receive 10 percent FTE support from SPH for their role in those programs.

During the COVID-19 pandemic, guidance on non-essential hiring was issued by UW Human Resources. Although new faculty recruitment is not being encouraged, such recruitment is allowed to proceed if it meets the UW critical hire criteria. These include enabling research to continue or maintaining access to learning. SPH used strategic decision making based on these criteria in submitting its 2020-21 faculty hiring plan.

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

Strengths

- SPH has a large core faculty, each of whom has deep expertise and scholarship in their area.
- Collectively, the areas of scholarship represented cover a broad array of topics of high importance to public health.

Weaknesses and Plans for improvement

- While recent faculty retirements have created capacity to hire, the School revisits the balance between maintaining strength in a field and hiring faculty to lead new fields. Potential lack of balance is exacerbated by the fact that hiring priorities have traditionally been identified by departments and then proposed to the Dean for review, as opposed to being examined holistically across the School. Over the last two years, the School has been working to implement a more collaborative process for defining hiring priorities that involves School-wide discussions with the Dean. New guidance from the UW Provost has contributed additional constraints. The Provost mandated departments give priority to assistant professor lines over more senior tenure line hires. Secondary effects of these constraints include a further prioritization of recruiting faculty to fill open directorships for research centers, and the need to establish mentorship and other supports for less seasoned faculty. These prioritizations also fit with the guidance on new hires during the COVID-19 pandemic.
- Consistent with the School's strong research focus, and commitment to continuous improvement in the educational programs, the School is constantly looking forward to new opportunities in emerging areas in both teaching and research. Examples include new hires in the area of food systems, nutrition, and health to support the new interdisciplinary undergraduate major, and in the area of human microbiome research. The deepening connections with practice partners are evolving and are expected to bring opportunities for new faculty appointments.

E2. Integration of Faculty with Practice Experience

- 1) **Describe the manner in which the public health faculty complement integrates perspectives from the field of practice, including information on appointment tracks for practitioners, if applicable. Faculty with significant practice experience outside of that which is typically associated with an academic career should also be identified.**

The SPH integrates perspectives from the field of practice through many mechanisms. In addition to the regular consultation with public health practice partners outside of academia described in Criterion F1, many of these partners are awarded clinical or affiliate faculty status, and are invited to guest lecture in classes, jointly mentor students, and collaborate in research such as community-based participatory research in which the partners take the lead. For example, the annual “disease detectives panel” usually includes Scott Lindquist, Kathy Lofy and Beth Melius from the Washington State Department of Health as guest panelists. During the 2019-20 academic year, Judy Simon MS, RDN, CD, CHES, FAND, clinical dietitian (who co-teaches NUTR 526: Maternal and Pediatric Nutrition), and Jodi-Ann Burey, MPH, senior director for diversity, equity and inclusion for The Riveter and Desiree Wilkins Finch, MA, principal consultant with RISE Leadership With Purpose LLC, are both clinical instructors in Health Services and teach about racism in the workplace as part of the Community-Oriented Public Health Practice MPH program.

In addition to expected scholarship in the three areas of teaching, research, and service (SPH Academic Affairs Handbook, page 13, as referenced in Criterion A1.3), many faculty in the SPH engage in academic public health practice (academic PHP). To encourage the advancement of scholarship in this area, SPH has established guidelines to evaluate scholarly academic PHP activities along with research activities as evidence of readiness for promotion (SPH Academic Affairs Handbook, page 25, as referenced in Criterion A1.3). The growth over time of impact and leadership in academic public health practice is a robust area for evaluation, and has been exceeded by faculty promoted to professor in at least two instances over the last seven years.

Many members of the SPH faculty have worked in public health agencies or practice prior to their appointment in the SPH, and they maintain their network of colleagues from those agencies. For example:

- Centers for Disease Control and Prevention: Ann Duerr, Jeff Harris, Aaron Katz, Jeff Lane, Robert Martin, Ali Mokdad, Jennifer Otten, Judith Wasserheit.
- World Health Organization: Donna Denno, Carey Farquhar, King Holmes, Charles Mock.
- Food and Drug Administration: Larry Kessler.
- State and Local Health Departments: Susan Allan, Janet Baseman, Betty Bekemeier, Tania Busch Isaksen, Nicole Errett, Matt Golden, Anjum Hajat, Jeff Harris, Karen Hartfield, Aaron Katz, Christine Khosropour, Hendrika Meishke, Jennifer Otten, Judith Wasserheit.
- Epidemic Intelligence Service: Andy Dannenburg, Jeff Harris, Lisa Jackson, Jai Lingappa.
- Health Care Management and Policy: Sarah Cave, Mary Alice Hankin, Bob Malte, Kathleen Peterson, Andy Stergachis.
- U.S. Agency for International Development: Jeff Harris, Aaron Katz, Jeff Lane, Mary Anne Mercer, Gabrielle O'Malley.

Considering the field of practice on a global scale, the Department of Global Health (DGH) has strong links with Ministries of Health (MOH) in Kenya, Mozambique, and Peru through the Kenya Research and Training Center (KRTC), Health Alliance International (HAI), and the International Training and Education Center for Health (ITECH). These DGH centers work to improve health systems and train public health practitioners and leaders around the world. DGH faculty incorporate perspectives gained from global practice-oriented collaborations into their interactions with students inside and outside the classroom. DGH also offers affiliate faculty positions to colleagues at these institutions. For example, Dr. Patricia Garcia, former Head of the Peruvian MOH, is an affiliate professor in DGH who mentors MPH students and guest lectures in DGH seminars and classes.

Public Health practitioners who mentor and collaborate with faculty and students on a regular basis are generally offered a clinical professor appointment at the appropriate rank. Such appointments are annual, and are made after nomination, department faculty discussion, and vote. They are reviewed by faculty on an annual basis and renewal is subject to a confidential vote of the majority.

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

Strengths

- The SPH faculty bring a wide variety of practice experience in the local, regional, and global communities.
- The SPH review criteria for promotion includes academic public health practice, encourages a holistic review of each faculty member, and recognizes a wider diversity of service and practice portfolios across the faculty.
- SPH has a strong track record of bringing experienced practitioners in to the classroom and partnering with community practitioners in classroom activities. The SPH departments have an increasing cohort of alumni working around the world to promote public health, and this network provides an excellent basis for expanding public health partnerships as needs evolve.
- In September 2019, SPH hosted a Partnership Summit with the Washington State Department of Health. The goal was to identify shared partnership opportunities, mutual academic goals, and key focus areas to strengthen academic-practice partnerships to improve and protect the public's health in Washington. The day-long Summit included a mix of co-presentations that highlighted existing partnerships, including faculty and staff, as well as interactive sessions to explore next steps for creating new opportunities. To facilitate this, executive leaders from the School and the Department of Health shared details about their priorities, key funding sources, and their organizational structures.

Weaknesses and Plans for improvement

- A strong focus on educating individuals in preparation for research careers in public health has historically meant less focus on the integration of public health practice topics and the skills needed for practice careers into the core curriculum. With the re-envisioned MPH, an explicit commitment has been made to balance the education and training of practice-informed researchers with that of research-informed practitioners (the touchstone referenced in Criterion D1). It is expected that this will lead to even broader engagement of faculty and students with the public health practice community.
- SPH continues to build more infrastructure to support formal and informal collaborations, look for sustainable funding, and consider optimal configurations of faculty, staff, and leadership positions best suited for this work. In relation to strengthening the support for, and expanded activities of, the academic health department with Public Health-Seattle & King County, the UW School of Public Health and UW School of Nursing were awarded a substantial intramural grant to the UW campus-wide Population Health Initiative. The award contributes funding to a joint faculty position to serve with Public Health-Seattle & King County.
- SPH is committed to continuing discussions on how best to align faculty research interests and initiatives with practitioners' time-sensitive needs for data and other information to support informed decision-making, policy development, and program improvements. Specific areas of overlapping interest with the Washington State Department of Health include: health care systems transformation, informatics, foundational public health services assessment, community health workers, opioids, COVID-19, HIV, and the Tobacco 21 initiative.

E3. Faculty Instructional Effectiveness

- 1) **Describe the means through which the school ensures that faculty are informed and maintain currency in their areas of instructional responsibility. The description must address both primary instructional and non-primary instructional faculty and should provide examples as relevant.**

As described in the SPH Academic Affairs Handbook (as referenced in Criterion A1.3), faculty are reviewed annually by their colleagues (annual faculty reviews). During these annual reviews, faculty at a higher rank discuss the merit of each faculty member, as determined through teaching, scholarship (research and academic public health practice), and service activities. Input into these discussions includes narrative self-assessments and course peer reviews. As described in the [UW Faculty Code](#) (section 24-57C), all faculty undergo a periodic review with their department chair. During these meetings departmental chairs and faculty can review and discuss future plans for each faculty member with respect to teaching, scholarship, and service accomplishments. Inherent to both the annual reviews with the chair and annual faculty reviews there is opportunity to identify accomplishments and areas for improvements with respect to instructional responsibilities and topic area competency for each faculty member. Collective information from these processes result in development of a shared strategic plan for faculty members, increased mentorship and skill development for faculty, as well as systematic enhancements across educational programs.

Curriculum committees in each department, program, and at the School level also have the responsibility to ensure faculty remain current in their areas of instructional responsibility. Each department and program conducts its own process, but all include:

- Review of course syllabi and learning objectives
- Course web site review
- Student feedback through quarterly course evaluations
- Review of assessments/deliverables

Information gleaned from these processes are shared with department chairs and curriculum leads. If changes are recommended or required, these are discussed during the annual in-person faculty member/department chair meetings and a shared plan agreed upon to address the areas in need of improvement.

Because all faculty at UW are subject to the [Faculty Code](#) and reviews are reported to the Vice Provost for Academic Personnel, similar processes are followed for the non-PIF faculty. These faculty have appointments across a range of schools and colleges, including Arts and Sciences (e.g., Psychology, Statistics), Medicine, Pharmacy, and Nursing.

As an example of ensuring faculty are current in their area of instructional responsibility, in the newly designed MPH Common Core curriculum, multiple mechanisms were put in place to ensure that the instructors of those courses were both experts in the topic and were able to provide high-quality instruction. The process, conducted in 2019, included a School-wide request for nominations for instructors for the Common Core courses. The request received more than 200 nominations of 60 instructors. From that list of nominations, 12 faculty members were chosen based on expertise and teaching experience. Further, each of the faculty chosen represent the breadth of expertise needed to represent the multidisciplinary approach for the Masters of Public Health students. To ensure evidence-based teaching strategies are implemented, trainings were provided to these faculty members in student-centered pedagogy were given across the academic year prior to starting the new curriculum (2019-20).

Another example is that the Public Health-Global Health major core teaching faculty meet twice per year for teaching retreats to enhance their instructional effectiveness, team-building, and collaboration. Retreats are structured to include evidence-based teaching skill building activities, team-bonding (both program staff and core faculty), and development of consistent tools for use across courses (peer review tools, assignment format, referencing tools). Core courses use a team-teaching approach building on collaboration and support.

To maintain standing to teach, supervise, and mentor students, faculty across the School are encouraged to attend national and international conferences to stay current in their field, and serve on study sections as another mechanism for staying current. Additional opportunities for continuing education are provided by the School and UW. Every department also hosts its own seminar series, which faculty are expected to attend and to occasionally present their work. These activities further enhance the expertise of faculty and improve instructional effectiveness.

2) Describe the school's procedures for evaluating faculty instructional effectiveness. Include a description of the processes used for student course evaluations and peer evaluations, if applicable.

The SPH evaluates faculty instructional effectiveness through a holistic process which includes: student course evaluations, peer evaluations of teaching materials, and peer observations of course instruction (SPH Academic Affairs Handbook, page 18). A new initiative in mid-course evaluation to provide early feedback to faculty and enable mid-course correction if necessary has been implemented recently in some programs. Two catalyzing factors for this were: 1. a required move to online education in Spring Quarter 2020 due to COVID-19; and 2. a suite of new co-taught courses for the MPH Common Core starting in Autumn Quarter 2020. The evaluations are shared with the instructors.

Student evaluations are required for each course at every offering, and are collected using the Instructional Assessment System ([IASystem™](#)) developed by the University of Washington. There are two levels of review: first at the program or department level by the chair or program director; and second by the Curriculum and Education Policy Committee (CEPC). In general, the *Adjusted Combined Median Overall Summative Rating* is used to identify courses in need of review. The policy within each department and of CEPC is that any course falling below a 3.0 (on a scale of 1.0-5.0) or on a downward trend of student ratings is flagged for further review and discussed in individual meetings between the department chair (or program director) and the faculty course instructor. Course-focused discussions may occur in the department/program curriculum committee meetings or in CEPC. The assessments of faculty effectiveness are ongoing, and additional training using UW resources such as through the [UW Center for Teaching and Learning](#) (CTL) may be recommended.

Qualitative student course comments are available to the instructor, and to the program director and/or department chair only. Any themes that highlight an inappropriate classroom environment or inappropriate instruction are also flagged for discussion. It is the responsibility of the department chair to communicate concerns with the faculty member, and provide constructive suggestions for improving the course, or reassigning teaching responsibility.

The peer review system of faculty effectiveness in course teaching includes peer evaluations of teaching materials and peer observations of course instruction. These are conducted as per the UW Faculty Bylaws (noted above) for each faculty position and dictated by the UW Office of Academic Personnel (e.g., assistant professors are required to have an annual peer evaluation, associate and full professors are reviewed once every three years, including the year prior to promotion review). Each department is responsible for organizing and completing peer reviews of their courses. While each system may differ in execution, they all include an assessment of the content included and the instructional effectiveness. As with the student reviews, the peer reviews of the courses are shared with department chairs, who in turn discuss at the regular individual meeting with the faculty member,

including the summary and ideas for improvements as needed in future course offerings, in order to enhance instructional effectiveness.

3) Describe available university and programmatic support for continuous improvement in faculty's instructional roles. Provide three to five examples of school involvement in or use of these resources. The description must address both primary instructional faculty and non-primary instructional faculty.

The University and programmatic support and resources for continuous improvement in teaching effectiveness extend to both primary instructional faculty, and non-primary instructional faculty.

Teaching, Learning, Sharing workshops had been offered by the SPH Office of the Dean from 2016 to early 2020. The workshops, as designed, were two to four hours in length, and were interactive sessions covering important and timely topics such as incorporating writing into course design, inclusive teaching, and mentoring. In conjunction with the CTL, these sessions also included trainings on recognizing microaggressions and on strategies to improve classroom climate. Because of the uneven participation by faculty, and a desire to reach a larger proportion of the faculty, the School is currently reviewing the best mechanism to replace/update these workshops.

The CTL offers a wide range of resources, workshops, courses, and communities of practice, in which SPH participates. For example, prior to the start of each Autumn Quarter, all new teaching assistants (TAs) are required to participate in the annual TA Conference on Teaching and Learning. Topics addressed in these interactive sessions include equity and access, active learning, effective discussions, and grading. CTL support for faculty transitioning their courses to an online format for the first time due to COVID-19 has been exceptionally strong.

Faculty are also encouraged to participate in the CTL-sponsored Evidence-Based Teaching (EBT) program⁵. EBT participants are assigned a small cohort of faculty that work together for one continuous year. They attend online discussions and in-person meetings four times per quarter, observe peers in their classrooms, learn what research says about effective teaching, experiment with new approaches, and explore ways to conduct classroom-based research.

4) Describe the role of evaluations of instructional effectiveness in decisions about faculty advancement.

As outlined in the SPH Academic Affairs Handbook (page 18), "a candidate for promotion should demonstrate reasonable success in student learning in their subjects as indicated on student evaluation forms, peer evaluations of teaching materials, and peer observations of course instruction. These student and peer evaluations provide the primary evidence of meeting this objective. Other evaluation materials may be considered according to the conventions of the candidate's field." For example, evidence of high-quality and impact can be based on one or more of the following:

- Nomination for or receipt of course teaching awards.
- Invitations to lecture or lead instructional sessions at regional, national, or international scientific meetings or professional courses.
- Invited participation in course advisory committees or institutional instructional review boards.
- Leadership positions in instructional efforts by professional societies.
- Positive evaluation of teaching productivity, quality, and impact as described in letters from independent, recognized experts in the candidate's field.

⁵ The [Evidence-Based Teaching Program](#) (EBT) offers collaborative peer support, as well as support from teaching and technology consultants, in cross-disciplinary groups facilitated by UW faculty.

- 5) **Select at least three indicators, with one from each of the listed categories that are meaningful to the school and relate to instructional quality. Describe the school's approach and progress over the last three years for each of the chosen indicators. In addition to at least three from the lists in the criteria, the school may add indicators that are significant to its own mission and context.**

Faculty currency—Annual or other regular reviews of faculty productivity, relation of scholarship to instruction

As part of a CEPC initiative, which began in 2016, departments in the School have been working to review and revise the processes of regular review of faculty teaching. As a result, there is increased focus and attention on how SPH evaluates instructional quality in relation to scholarship. Changes in the Environmental and Occupational Health Sciences department (EOHS) provide good examples. As in other SPH departments, annual merit reviews in the EOHS are supported by faculty generated self-assessments that provide information on teaching, service, academic public health practice, and research. In 2017, several changes were made asking faculty to submit a prospective faculty plan in the spring, in which faculty describe their plans for the upcoming year. In this prospective plan, faculty are asked to reflect on their plans, commenting on what was accomplished and any changes. The addition of the reflection step is credited with providing for a deeper review of teaching and scholarship and encouraging faculty to develop plans to ensure their scholarship and instruction align with the mission and vision of the department and SPH. The plans are reviewed by other faculty and presented at the annual faculty merit review meeting, and, in EOHS in particular, attention is paid as to how scholarship translates to the faculty member's instruction. Resources are identified to enhance the faculty member's skill (see E3.3 for more details).

Faculty instructional technique—Participation in professional development related to instruction

The Re-Envisioning the Master of Public Health (MPH) Program Phase 2 Steering Committee (2019) recommended that all MPH Common Core faculty receive team teaching, active-learning, and student-based-learning training from the CTL. This was accomplished by requesting all faculty that teach in the MPH Common Core engage in an evidence-based teaching group (2019-20). As has been described in section E3.3, the group engaged in purposeful discussion, facilitated by the CTL, around evidence-based teaching (including active- and student-based learning) and team teaching. As was described in Criterion A, the School of Public Health is one of seven core "departments" at UW that form an internal Consortium for the Advancement of Undergraduate STEM Education (CAUSE), funded by the National Science Foundation. [A recent poster](#) reporting results from this effort concluded "Faculty report that CAUSE has broadened their knowledge and perspectives of evidence-based teaching across STEM disciplines and provided practical feedback on their teaching." Within the SPH engagement of new faculty in EBT, and their participation in weekly EBT learning groups led by an SPH faculty member, has been quite successful. Between 2017 and 2020, the number of learning groups tripled.

School- or program-level outcomes—Courses that are team-taught with multi-disciplinary perspectives

The School's interdisciplinary undergraduate and MPH programs have incorporated multi-disciplinary approaches. The Public Health-Global Health major core course series is structured using a co-teaching model and faculty selection includes evaluating faculty for diverse professional perspectives. This model was adapted in the development of the new MPH Common Core courses.

Co-teaching with a faculty member from a different discipline comes with advantages and disadvantages. Public health practice requires collaborative work across disciplines. It is believed that bringing together instructors with different professional backgrounds demonstrates for students the diversity of skills, perspectives, and approaches necessary within public health. Faculty, in addition to students, gain advantage by working with colleagues with different disciplinary training, skill sets, and experience—whether it is quantitative vs. qualitative methods; domestic vs. global experiences; research or practice.

On the other hand, co-teaching is not without challenges for faculty and students. As faculty work together to identify theories, frameworks, and examples to build student competencies, they have to:

- negotiate what to include or not include
- know what is happening in all sessions across a course
- practice good communication to ensure consistent messaging to students

From a student perspective, students sometimes struggle with the reality that there are a range of approaches and applications of skills and not a single right or wrong approach in most situations. What has worked well in the Public Health-Global Health (PH-GH) majors is having consistent teaching teams and regular opportunities for core teaching faculty to come together. Most of the core courses have had the same instructors for several years. Over the last three years, PH-GH majors have improved delivery and curriculum by gradually moving to a focus on core theories and frameworks that align with course competencies. The emphasis is on the theory, and faculty use their expertise and experience to bring theories to life and demonstrate how theories are applied in different settings. The more transparent PH-GH has become with both students and faculty, the more effective this approach has been in the curriculum.

For interprofessional approaches to be incorporated in the MPH curriculum in the accepted sense of different professions, SPH has partnered with the UW Center for Health Sciences Interprofessional Education (CHSIE) and is engaged actively in the UW Interprofessional Active Learning Series (iPALS). iPALS is an opportunity for students from across the health sciences to prepare themselves to practice effectively on interprofessional teams, through working together on topics of interest in healthcare and population health. The iPALS sessions are developed by faculty and/or clinician content experts within the UW community, and are intended to be appropriate for all learners regardless of their profession or level of training. Sessions take place in a large classroom, where students are assigned to small interprofessional teams at tables. Students from all graduate level health profession training programs are encouraged to participate. Since 2018, School of Public Health faculty have co-designed some iPALS sessions—including faculty affiliated with the One Health MPH program and faculty in the Nutritional Sciences program.

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

Strengths

- The School regularly assesses faculty instructional effectiveness, evaluates trends, monitors improvements, and implements additional supports or rotation of faculty responsibility. For example, since 2013, the PH-GH major has used a continuous improvement model and a practice of shared responsibility across the core faculty using their biannual core faculty retreats. Many of the core faculty in PH-GH have participated in the faculty development program, adopting evidence-based teaching methods in their classroom. The MPH Steering Committee has incorporated a detailed plan for evaluation of core courses, including mid-course assessments. Regular faculty training for co-teaching and in use of evidence-based methods will be implemented. Evaluation of the re-envisioned MPH degree overall will ensure the School is meeting the needs of MPH students in a thoughtful, academically challenging, and practice-relevant way.

Plans for improvement

- During the 2019-20 academic year, the senior associate dean position in the Office of the Dean was split into two vice dean positions: vice dean for strategy, faculty affairs, and new initiatives and vice dean for education. The vice dean for education position exclusively focuses on education and comes with explicit expectations for oversight of both undergraduate and graduate programs, and for innovation in the area of improving and tracking instructional effectiveness. This position is also responsible for developing and overseeing a professional development training program for faculty, related to pedagogy. Including training on student-centered learning and incorporation of equity, diversity, inclusion, and anti-racist principles into teaching.

Additional materials included in the Electronic Resource File:

Electronic Resource File\Criterion_E\Additional Information.

E4. Faculty Scholarship

1) Describe the school's definition of and expectations regarding faculty research and scholarly activity.

Members of the faculty are scholars in their respective disciplines in public health and are expected to publish their work in peer reviewed journals. Scholarly activities include research and academic public health practice (PHP). Evidence of scholarship in research and evidence of scholarship in academic PHP are considered together. Innovative and interdisciplinary efforts in research, and academic PHP scholarship are encouraged.

In reviewing a candidate proposed for promotion, the senior faculty and SPH Faculty Council look for evidence of quality, productivity and impact. Expectations of faculty research and scholarly activity for assistant to associate and from associate to full professor are described in detail in the SPH Academic Affairs Handbook: <https://sph.washington.edu/faculty/academic-resources/sph-academic-affairs-handbook>.

Source: Academic Affairs Handbook: "Detailed Criteria for Promotion: Research," and "Detailed Criteria for Promotion: Academic Public Health Practice."

2) Describe available university and school support for research and scholarly activities.

Administrative support for research and scholarly activities is provided both at the UW level via the Office of Research and at the School level from the Office of the Dean. After a number of years in which there was not a free-standing position of associate dean for research in the School, this position was re-implemented in the summer of 2019. The associate dean for research serves as the School's primary representative to the UW Office of Research and to ASPPH on research-related matters. Innovations in such research support have been made centrally at UW over the past five years with the introduction of online Institutional Review Board (IRB) review, supportive tools on MyResearchProjectLifecycle, research training, and training collaboratives in research education. Supports within the School have taken different forms, including mock study section reviews at the department level, and the establishment of a Research Council charged with developing School-wide priorities and sharing information about research and funding opportunities, as well as School-wide best practices.

Funding support for research and scholarly activities has been described in Criterion C, and includes the following funding opportunities:

- Royalty Research Fund
- Occasional targeted pilot funding
- Provost re-investment funds applications
- Supplementary funding for training grants
- Population Health Initiative funding
- UW Center for AIDS Research funding
- Alcohol and Drug Abuse Institute funding

Although these opportunities are very competitive, SPH faculty have increasingly been successful in securing funding. For example, the Royalty Research Fund typically has half a dozen faculty from SPH apply for one of their cycles, and about one in six receive funding. The Population Health Initiative holds an annual pilot fund competition; in 2020, four of six funded proposals (67 percent) involved SPH faculty. In 2020, the Population Health Initiative also awarded three rounds of small grants to support COVID-19-related research. SPH faculty were successful in securing these funds too; they served as either principal investigators or co-investigators in 38 percent to 44 percent of the awarded grants.

National Institutes of Health (NIH) funding is often supplemented by School support thereby enhancing scholarly opportunities for graduate students, through research participation or structured trainee or fellowship seminars.

There is an array of more than 30 research centers associated with SPH (see the list in the Electronic Resource File: Electronic Resource File\Criterion_E\Additional Information), dedicated to tackling big population health problems in order to advance the field of public health. Many of these centers have significant extramural funding (UW is one of the only institutions in the United States to have awards for each of the types of major public health centers funded through HRSA and the CDC), and several have run their own pilot grant programs.

3) Describe and provide three to five examples of faculty research activities and how faculty integrate research and scholarly activities and experience into their instruction of students.

- Dr. Janet Baseman's (Epidemiology) research is focused on three areas: applied epidemiology in public health practice, strategies for improving disease surveillance systems, and public health informatics. Dr. Baseman teaches EPI 201: Outbreak Investigation and Response and EPI 594: Field Epidemiology: Student Epidemic Action Leaders (SEAL) team. Based on her research and academic public health practice contributions, she is uniquely able to weave in her scholarship into the instruction of students in a broad sense. She engages her students in discussions of the complex causes of epidemics and challenges to outbreak response, and provides opportunities in field experience for her students to become part of the solution. Her SEAL team was actively engaged with local public health agencies in both scholarly and practical ways during the early months of the COVID-19 pandemic.
- India Ornelas (Health Services), is the MPH Core Director and research director for the Latino Center for Health. Her research focuses on racial and ethnic health disparities and social determinants of health. She teaches and mentors students in the areas of social determinants of health, health disparities, and community engagement. (PHI 515: Implementing Public Health Interventions, HSERV 555 Health Disparities; HSERV 580 Foundations of Health Behavior and Social Determinants of Health). Dr. Ornelas uses real-world examples from her research in Latino and immigrant populations and in partnership with members of the Navajo Nation. These examples help to further students' learning and understanding of complex health behavior and health promotion theory and practice. She is active in engaging and mentoring students in community-based participatory research projects and supporting student visits to those projects in both the State of Washington and in New Mexico.
- Jeff Lane (Global Health), has conducted several recent policy projects with the Center for Disease Control, USAID (United States Agency for International Development), and PEPFAR (President's Emergency Plan for AIDS Relief) that led to an analytic framework for policy development and advocacy. He incorporated this analytic framework into GH 523: Policy Development and Advocacy for Global Health, as its central organizing framework. The course provides students with guidance on how to integrate qualitative and quantitative research, stakeholder analysis, and policy analysis into policy improvement.
- Deepa Rao (Global Health, Psychiatry, and Behavioral Sciences) is a Licensed Clinical Psychologist who is Associate Director of the Global Mental Health Program, where her research focuses on implementing and disseminating effective behavioral interventions in non-psychiatric settings to improve mental health, reduce stigma, and help people better engage in their care. Dr. Rao leads GH 593: MPH Workshop and teaches GH 456/556: Global Mental Health, incorporating her research methods and findings into her classroom.

4) Describe and provide three to five examples of student opportunities for involvement in faculty research and scholarly activities.

- Jessica Mogk (MPH '18) collaborated with Amy Hagopian (Global Health, Health Services), as well as other UW researchers and community partners to lead a study evaluating how a history of incarceration or legal debt may predict homelessness. The study became her capstone for the Health Services: Community-Oriented Public Health Practice MPH. Findings support the long-held argument that court-imposed fees and fines may keep the most vulnerable people in a vicious cycle of poverty and incarceration.
- Counties in the United States with greater gaps between rich and poor have a higher rate of homicide deaths involving firearms, according to [a national study](#) by Ali Rowhani-Rahbar, Anjum Hajat, Fred Rivara, and PhD student Erin Morgan (all Epidemiology). Erin participated actively in the research, from design through analysis and preparation for publication.
- Seattle's minimum wage increases did not boost supermarket prices in the city in the two years after the policy began, according to a [study](#) led by PhD candidate James Buszkiewicz (Epidemiology), with faculty member Anju Aggarwal (Epidemiology, Nutritional Sciences), and Adam Drewnowski (Epidemiology, Nutritional Sciences). Research in the food environment is one of the strands of Dr. Drewnowski's research, so provided the opportunity for James Buszkiewicz to join the research team and identify an independent research question to pursue for his dissertation.
- An [interactive tool](#) developed by Edmund Seto and PhD student Esther Min (both Environmental and Occupational Health Sciences) shows how Washington communities rank on environmental health risk factors, from higher rates of poverty and unaffordable housing to greater susceptibility to the health effects of pollution. Risk assessment is one of the areas of research focus of Dr. Seto, and Esther Min was interested in finding a program with strong community relationships. The resulting collaboration brings student and faculty together in a strong environmental justice project. See stories from [Crosscut](#) and [KUOW](#).
- MPH students Jade Pagkas-Bather (Epidemiology) and Jahn Jaramillo (Global Health) worked with Global Health faculty member Susan Graham on a research project funded by a CFAR (Center for AIDS Research) Global 2 Local Award. The "What's PrEP?" project recruited over 100 Black and Latinx men who have sex with men in western Washington to investigate barriers and facilitators to peer navigation in support of uptake and adherence to pre-exposure prophylaxis against HIV infection. Both students completed MPH thesis projects related to this work.

5) Describe the role of research and scholarly activity in decisions about faculty advancement.

Faculty in the "regular" track considered for promotion at the UW are required to demonstrate contributions to scholarship in the areas of teaching, research, and service. As indicated earlier, an additional area of scholarship that can be taken into account in SPH is that of academic public health practice (academic PHP). Evidence of scholarship in research and evidence of scholarship in academic PHP are typically considered together. It is important to note that many faculty in SPH are appointed to the regular track as "without tenure for reason of funding" (WOTRF). The criteria for appointment and promotion for WOTRF faculty at UW and the privileges of WOTRF faculty are identical to those for tenure-track faculty; the only difference is that there is not a long-term institutional funding commitment for their positions.

By contrast, faculty in the "research track," which is also a soft-money track with no potential for tenure, have separate criteria for advancement and promotion, which focus primarily on research scholarship.

Likewise, the criteria for appointment and promotion for “teaching” faculty focus primarily around teaching scholarship. The “teaching faculty” track at UW was previously referred to as the “lecturer track” (lecturer, senior lecturer, and principal lecturer). Changes are being made to the UW Faculty Code in 2020 to more fully recognize these individuals. Starting in the 2020-21 academic year, individuals who were previously designated as lecturers will now be appointed as teaching professors. The teaching professor track includes the ranks of assistant teaching professor (equivalent to lecturer), associate teaching professor (equivalent to senior lecturer), and teaching professor (equivalent to principal lecturer). Teaching faculty remain ineligible for tenure under the new policy.⁶

Promotion requires a significant contribution of the faculty member to his or her field of research and/or teaching, with evidence of a national or international scientific reputation depending on professorial rank. Senior faculty in the departments and the SPH Faculty Council are responsible for reviewing each faculty candidate for promotion. They examine and evaluate evidence of quality, productivity, and trajectory of impact in the areas of teaching, research, academic PHP, and service, as appropriate.

All regular (tenure-track and WOTRF) and research faculty who are being considered for appointment or promotion in UW SPH must publish regularly in peer-reviewed journals. Evidence of high quality and impact include: sustained productivity in publication, including major contributions as senior author; scholarly reputation of the journals in which publications appear; citation of the research in other publications; indications of research reputation among peers; serving as principle investigator on funded grants or contracts; and/or serving as a major scientific contributor on a funded research grant. It is recognized that the research record commensurate with a given level of achievement varies from discipline to discipline within the SPH, but continued productivity in rank and expected trajectory of impact are considered at the time of evaluation.

Similarly, a trajectory of growing impact in academic PHP is expected for those faculty who include this emphasis in their portfolio. All regular tenure-track, WOTRF, and teaching track faculty are expected to have a teaching record of high quality, as judged by both peers and students. For teaching track faculty, measures of impact will vary and be appropriate to the teaching professor’s focus, but examples include evidence of directing productive work by advanced students, and evidence of training graduate and professional students in scholarly methods, as stated in the UW Faculty Code. Although most faculty are evaluated both on research scholarship and on teaching, for research track faculty the major emphasis is on research scholarship, and for the teaching track faculty the emphasis is on teaching scholarship.

- 6) Select at least three of the measures that are meaningful to the school and demonstrate its success in research and scholarly activities. Provide a target for each measure and data from the last three years in the format of Template E4-1. In addition to at least three from the list in the criteria, the school may add measures that are significant to its own mission and context.**

⁶ As of the time of this writing, these revised position titles are not yet effective and are, therefore, not reflected in this Report (e.g., template E1-1).

Outcome Measures for Faculty Research and Scholarly Activities				
Outcome Measure	Target	Year 1 2018-19	Year 2 2019-20	Year 3 2020-21
% faculty participation in research activities	90%	87%	89%	89%
total research funding*	\$180 million	\$189.6 million	\$244.9 million	\$223.8 million
# grant submissions	600	636	651	669
*Consistent with other financial data in this Self-Study, the total research funding includes all DGH research funding, in contrast to the data presented in Criterion A1.				

UW SPH is a research powerhouse, both among schools of public health nationally and among research-active units on the UW campus. Thus, the targets set in research (see table above) are ambitious and SPH faculty tend to achieve them.

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

Strengths

- The long history of successful funding of research, especially awards from NIH and NSF, is remarkable. As noted in Criterion A1.2, SPH ranks second amongst UW schools and colleges in annual grant expenditure measures.
- The integration of research with student education is evidenced by the number of doctoral programs offered by SPH, as well as by the examples included in this section of student opportunities of participation in faculty research, and of integration of research in formal course instruction.

Plans for improvement

- SPH plans to re-evaluate what outcome measures and targets are used for research and scholarly activities, including possibly revising the second two metrics shown in the template above (total research funding and number of grant submissions), to be indicators of growth as opposed to a fixed number. For example, research funding would change to a target of a 10 percent increase per year; grant submissions would be based on number of faculty, with a target of two per year for non-teaching faculty. These metrics would be more consistent with the new SPH faculty compensation plan which indicates that all faculty, except those with joint appointments primary in another department/institution or teaching-only faculty, should be writing at least two applications per year. A new target under discussion includes increasing the success of submitted applications, a target that would require increasing support for faculty, especially junior faculty.

E5. Faculty Extramural Service

1) Describe the school's definition and expectations regarding faculty extramural service activity. Explain how these relate/compare to university definitions and expectations.

The SPH defines service to include: University service (including to the faculty member's own department(s) and to the School of Public Health); other professional service (including to institutions specific to a discipline and to organizations at the local, state, and national levels); and broader community service. The last two categories (other professional service and broader community service) are considered extramural service: <https://sph.washington.edu/sites/default/files/2019-05/Faculty-Handbook-2019.pdf>.

The policy regarding service in SPH is consistent with UW policies, which encourage faculty extramural service in professional and scholarly service to schools, business, industry, and local, state, national, and international organizations: <https://www.washington.edu/admin/rules/policies/FCG/FCCH24.html>.

SPH expects all faculty will serve the community-at-large in a professional capacity that enhances the standing of the School and the University as a whole, and provides benefits to the broader society, consistent with its mission.

Examples of extramural professional service include:

- Lectures, consultation, or serving on an advisory committee at the local or state level
- Service on a study section
- Service on an editorial board of a professional journal
- Chairing or organizing a symposium or session within a scientific meeting
- Service on a review or site visit committee
- Participation or consultation to an accreditation or other educational review board
- Service on an advisory or policy-making committee or board
- Service to a professional organization
- Membership on a national or international committee, board, etc.
- Regular peer review of manuscripts or grants

Examples of broader community service (professional-related) include:

- Membership on boards and committees in the community-at-large
- Service on a K-12 school or college-level committee or board
- Community council or committee membership

2) Describe available university and school support for extramural service activities.

Opportunities to celebrate extramural faculty service occur both in the departments where faculty are appointed and at the School level. Faculty engaged in extramural service are frequently interviewed and celebrated in department and School online news and featured in print. Explicit expectation for these activities is built into the new faculty compensation model, effective July 1, 2020.

3) Describe and provide three to five examples of faculty extramural service activities and how faculty integrate service experiences into their instruction of students.

- UW's [Livable City Year](#) (LCY) program is led by faculty co-directors [Branden Born](#) (Urban Design and Planning in the College of the Built Environment) and [Jennifer Otten](#) (Environmental and Occupational Health Sciences and Nutritional Sciences Program in the School of Public Health). The program launched in 2016 in collaboration with [UW Sustainability](#) and [Urban@UW](#), and with

foundational support from the [College of Built Environments](#), the [Department of Urban Design and Planning](#), [Undergraduate Academic Affairs](#), and the [Association of Washington Cities](#). This provides an excellent example of faculty extramural service activity integrated into student instruction since whole classes of students partner with city leaders in undertaking a variety of projects. LCY provides students with real-world experiences while addressing current needs identified by city leaders. Four different cities have partnered with UW students and faculty as of spring 2020. LCY works with cities, counties, tribes, and special districts of all sizes and budgets. The program engages hundreds of students in high-priority projects, creating momentum on real-world challenges while enabling students to serve and learn from communities. Partner communities benefit directly from bold and applied ideas that propel fresh thinking, improve livability for residents, and invigorate city staff.

- Professor Ruth Etzioni's (Biostatistics) extramural service as a member of NIH study sections enabled her to develop part of the curriculum of BIOS 572: Advanced Regression Methods: Project, that was focused specifically on grant writing. Grant writing is an important skill that students are encouraged to learn as part of their graduate studies (and in some cases actually to facilitate their graduate studies). This course helps students transition from coursework to research, and is generally heavily focused on research design, methods, and writing.
- Aaron Katz (Health Services) is a founding board member of the [Washington State Budget & Policy Center](#), which advocates for State fiscal policies, including taxes and spending, that improve the well-being of all Washington state residents. This lens on the State budget is used in the course he co-teaches, HSERV 552: Health Policy Development, to emphasize the importance of State fiscal policy in public health.
- In the course BIOS 524: Design of Medical Studies, Professor Thomas Fleming presents the challenges and opportunities from experiences serving on federal panels. Through his role as chair of the international committee is to protect the interests of the patients with Ebola Virus Disease (EVD) in the Democratic Republic of Congo (DRC). The program not only provided state-of-the-art care to half of the 3,000 patients who were infected by the EVD outbreak in DRC during 2018-19, but established a paradigm for developing the infrastructure needed for the successful conduct of definitive randomized clinical trials in public health emergencies. The scientific and ethical insights from the EVD experiences in DRC have been woven into the classroom by Dr. Fleming, and are now being used by the WHO Working Group that is developing scientific processes to evaluate prevention and treatment interventions to address the COVID-19 pandemic. In turn, lessons learned from these currently evolving experiences in addressing the COVID-19 will be presented in future courses in the Biostatistics curriculum, including BIOS 524.

4) Describe and provide three to five examples of student opportunities for involvement in faculty extramural service.

- The UW Pacific Northwest Agricultural Safety and Health Center ([PNASH](#)), within the Department of Environmental and Occupational Health Sciences, is focused on safe and sustainable agricultural workplaces and communities, and dedicated to the prevention of illness and injury among producers, workers, and families connected to the agriculture, forestry, and fishing (AgFF) sectors. One of eleven regional centers, PNASH serves Alaska, Idaho, Oregon, and Washington, and integrates expertise from multiple disciplines, institutions, and community partners. The PNASH is a rich environment for student learning, as virtually all of its projects include some level of student involvement. In 2018, the PNASH Student AgFF Research Interest Group was started. Sixteen undergraduate and graduate students meet quarterly, with PNASH faculty, and staff in a student-led and student-focused forum. By supporting Undergraduate Research Experiences in Environmental Health (SURE-EH), and other UW support, the PNASH is able to provide meaningful student internships with PNASH faculty. At least three SURE-EH trainees have worked alongside PNASH faculty and staff.

- Dr. Amy Hagopian (Health Services) worked with graduate students in 2019 to write two separate policy statements for the American Public Health Association (APHA)—one to encourage the U.S. to stop bombing Yemen and stop the blockade on the ports; the other to re-enter the nuclear treaties from which the U.S. withdrew in recent years. APHA policy statements are complex and follow organization rules—ten page research papers follow a prescribed outline, and are backed by one or more APHA sections.

5) Select at least three of the indicators that are meaningful to the school and relate to service. Describe the school's approach and progress over the last three years for each of the chosen indicators. In addition to at least three from the list in the criteria, the school may add indicators that are significant to its own mission and context.

Important indicators for the School related to service include:

- Lectures, consultation, or serving on an advisory committee at the local or state level
- Service on a study section
- Service on an editorial board of a professional journal
- Service on an advisory or policy-making committee or board
- Membership on a national or international committee, board, etc.
- Membership on boards and committees in the community-at-large

The School's approach to tracking and celebrating progress with respect to these indicators is more qualitative than quantitative. Department annual reviews of each faculty member's curriculum vitae are conducted in early Spring Quarter for merit review purposes, as has been described in section E3. The reviews include public and professional service. Faculty elected to the Washington State Academy of Science or to one of the National Academies are honored at University-wide events. Faculty making significant contributions in the community are also honored by invitations to tell their story at meetings of the SPH Advisory Board.

The new SPH faculty compensation plan explicitly reviews both internal service and external service characterized as scholarly leadership (e.g., study sections, editorial boards, advisory boards) as expectations for faculty. Plans for how to incorporate these into faculty annual reviews starting in early 2021 have begun. Under current discussion is a proposal for a standardized online form that would capture the core elements of the faculty compensation plan so that data could be compiled more easily and reviewed across faculty and departments.

6) Describe the role of service in decisions about faculty advancement.

The role of accomplishments in service in decisions about faculty promotion and advancement is relatively small compared to the accomplishments in teaching and research. As stated in the UW Faculty Code, competence in professional service to the University and the public should be considered in judging a faculty member's qualifications, but, except in unusual circumstances, skill in instruction and research should be deemed of greater importance:

<https://www.washington.edu/admin/rules/policies/FCG/FCCH24.html>.

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

Strengths

- There is a strong culture within SPH of faculty engagement with the community, devoting considerable time to extramural service. The wide variety of this engagement can be inferred from the examples included above.

Weaknesses and Plans for improvement

- SPH has relied on its departments in the past to track and monitor faculty service. The result is information gathered in piecemeal fashion. With the 2020 faculty compensation plan and the expectations within it, discussions have started concerning how best to track and monitor faculty service within the Office of the Dean. This is one example of the type of data tracking and evaluation that will be coordinated under the supervision of the new associate dean for evaluation and improvement (as mentioned in Criterion B).

Criterion F

F1. Community Involvement in School Evaluation and Assessment

- 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 regularly engages with various stakeholders for feedback on activities, including curriculum alignment with professional and community public health needs, and strategic planning.

At the level of the Office of the Dean, the SPH Advisory Board advises the Dean on matters related to strategy and advancement.

Facilitated by the associate dean for public health practice, the Public Health Practice Advisory Council for MPH re-envisioning was a committee formed for a brief time period in early 2019 to advise the SPH on curriculum specific to the MPH. Members reviewed the new MPH Common Core curriculum and participated actively in the syllabus development phases of the MPH re-envisioning efforts related to the curriculum (detailed in Criterion D1, D2). These members included:

- Atar Baer, Analytics & Informatics Program Manager, Communicable Disease Epidemiology and Immunization Section, Public Health-Seattle & King County
- Tom Eversole, former health administrator for Benton County, Oregon; helped develop Oregon State University's College of Public Health and Human Sciences in 2008
- Gary Goldbaum, former health officer, Snohomish County, WA; SPH Epidemiology emeritus faculty
- Eyob Mazengia, Assistant Division Director of Environmental Public Health Services, DEOHS affiliate faculty
- Robin Pfohman, Community Resilience and Equity Program Manager, Public Health-Seattle & King County
- Wayne Turnberg, Communicable Diseases Director, Washington State Department of Health, DEOHS affiliate faculty
- Cathy Wasserman, state epidemiologist for non-communicable diseases, Washington State Department of Health, SPH Epidemiology affiliate faculty

At the department and interdisciplinary program levels, various strategies are employed for stakeholder engagement, including external advisory councils, alumni surveys, and student project preceptor surveys.

Member lists of some of these committees are below, effective 2019-20. Professional affiliations and credentials are included where available

SPH Advisory Board

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>	<i>Professional Affiliations</i>
Hugh Chang	Retired, Bill and Melinda Gates Foundation	MBA, MS	
Sanjay Chheda (Chair)	Retired, Intellectual Ventures, Vice President	MBA	
Jeffrey Lehman	Dialysis Consulting Group, Owner and President	MHA	
Nathaniel Miles	Eli Lilly and Company, Vice President		
Susan Morgensztern	Consultant		Member of WINGS Angel Network
Charles Nolan	Retired, Seattle King County Public Health	MD	
Jane Lee Quehrn	Retired, WA State Department of Health	MPH	Member of the Public Health Reserve Corps
Charles Stevens	Retired, Microsoft	MBA	

Nutritional Sciences Graduate Coordinated Program in Dietetics Advisory Board

<i>Name</i>	<i>Organization/Role</i>
Ben Atkinson	Auburn School District
Karen Barale	Washington State University Extension, associate professor emerita
Barb Bruemmer	UW, professor emerita
Cheryl Davis	Seattle Children's Hospital
Alysun Deckert	UW Medical Center
Amy Ellings	Department of Health
Sharon Feucht	Center on Human Development and Disability
Barb Pyper	Apple a Day, Inc
Barb Pullar	Harborview Medical Center

Global Health Advisory Board

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>	<i>Professional Affiliations</i>
Ala Alwan	UW Visiting Professor	MBChB, MRCP, FRCP	Honorary Professor of Public Health, Imperial College, London; Honorary Professor of Global Health, Oxford University
Arun Chockalingam	UW Professor	MS, PhD, FACC, FAHA, FIACS	Fellow of the American Heart Association, the American College of Cardiology and the International Academy of Cardiovascular Sciences
Jacqueline Darroch	Senior Fellow, Guttmacher Institute	PhD	
Christopher Elias	Bill & Melinda Gates Foundation, President of Global Development	MD, MPH	Member of the Institute of Medicine

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>	<i>Professional Affiliations</i>
David Fleming	PATH, Vice President of Public Health	MD	
Patricia Garcia	Cayetano Heredia University, Professor	MD, MPH, PhD	Member of the PAHO Foundation Technical Advisory Group
Margaret Hamburg	National Academy of Medicine, Foreign Secretary	MD	Fellow of the American Association for the Advancement of Science and the American College of Physicians; member of the Council on Foreign Relations and the Institute of Medicine, National Academy of Sciences
Denis Hayes	The Bullitt Foundation, President and CEO	JD	
Lee Huntsman	UW, President Emeritus	PhD	Fellow of the American Institute of Medical and Biological Engineering, the Biomedical Engineering Society and the American Association for the Advancement of Science
Ruth Nduati	University of Nairobi, College of Health Sciences, Department of Pediatrics, Professor	MBChB, MPH	
Guy Palmer	Washington State University, Global Health, Creighton Chair and Senior Director	DVM, PhD	Member of the National Academy of Medicine; Serves on advisory boards for the Southern Africa Center for Infectious Diseases Surveillance, the NIH Fogarty International Program on Foodborne Diseases in East Africa, and the Scientific Advisory Board for the Nelson Mandela Institute

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>	<i>Professional Affiliations</i>
Vikram Patel	Global Health and Social Medicine, Professor	FMEDSci	Fellow to the UK Academy of Medical Sciences; Serves on three WHO Committees (Mental Health; Maternal, Child and Adolescent Health; EMRO Mental Health); Serves on four Government of India committees: the Mental Health Policy Group; the National Rural Health Mission ASHA Mentoring Group; the National Human Rights Commission Core Committee on Health; and the Technical Advisory Group of the Rashtriya Kishor Swasthya Karyakram
Peter Piot	London School of Hygiene and Tropical Medicine, Director and Professor of Global Health	MD, PhD, FRCP, FMEDSci	Member of the US National Academy of Medicine, of the Académie Nationale de Médecine of France, and of the Royal Academy of Medicine of his native Belgium, and a fellow of the Academy of Medical Sciences, UK, and the Royal College of Physicians
Brooks Simpson	Pacific Rim Medical Systems, President		Chairman of the R. Hunter Simpson Foundation and a board member for the Washington Research Foundation
Bruder Stapleton	Seattle Children's Hospital and Regional Medical Center, Senior Vice President and Chief Academic Officer	MD	

Master of Health Informatics and Health Information Management Advisory Board

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>
Sally Beahan	UW Medical Center, Director, Health Information Management Strategic Planning and Projects	MHA, RHIA
Theresa Bervell	Providence Health, Manager, Compliance and Privacy	MHA, RHIA, CHPC
Amy Bolin-Deon	Virginia Mason Medical Center, Administrative Director, Health Information Management	MHIS, RHIA, CHP
James Condon	UW, Associate Director, Health Informatics and Health Information Management Programs	EdD, RHIA, CTR
Sheila Green-Shook	Green-Shook Consulting, Principal	MHA, RHIA, CHP, FAHIMA

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>
Mary Alice Hanken	Sound Mental Health, Quality Manager	PhD, RHIA, CHPS
Jeff Harris	UW School of Public Health, Chair and Professor, Department of Health Services	MD, MPH, MBA
Seth Hennessey	UW Medicine, Director of Business Development	MHA
Ernie Hood	The Advisory Board Company, Senior Director, Research and Insights	
Bryant Karras	Washington State Department of Health, Chief Informatics Officer	MD
Teresea Kennedy-Dean	Puget Partners, Principal Consultant	MHI, PMP
Tom Martin	Evergreen Healthcare, Senior Vice President and Chief Strategy and Information Officer	
Gretchen Murphy	UW, retired faculty	Med, RHIA, FAHIMA
Joe Nichols	Health Data Consulting, Principal	MD
Kathleen Nguyen	Seattle Children's Hospital, Director of Health Information Management	MHI, RHIA

Bachelor of Science in Health Informatics and Health Information Management Advisory Committee

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>
Becky Rios (Chair)	Swedish Medical Center, Manager, Release of Information	MBA, RHIA
Sally Beahan	UW Medical Center, Director, Health Information Management Strategic Planning and Projects	MHA, RHIA
Ellen Cadwell	Shoreline Community College, Director, Health Informatics and Information Management Program	RHIA
James Condo	UW, Associate Director, Health Informatics and Health Information Management Programs	EdD, RHIA, CTR
Carrie Cordero	UW, Health Information and Health Information Management Faculty	MHA, RHIA
Karen English	UW, Quality Consultant, Center for Clinical Excellence	RHIA
Sheila Green-Shook	Green-Shook Consulting, Principal	MHA, RHIA, CHP, FAHIMA
Mary Alice Hanken	Sound Mental Health, Quality Manager	PhD, RHIA, CHPS
Jeff Harris	UW School of Public Health, Chair and Professor, Department of Health Services	MD, MPH, MBA
Susan Helbig	UW, Health Information and Health Information Management Faculty	MA, RHIA
Linda Heller	Franciscan Health System, Catholic Health Initiatives, Compliance Specialist Corporate Responsibility	RHIA, CPC
Kate Lorenzen	UW Continuum College, Assistant Director, Academic Programs	
Connie Montgomery	UW, Counseling Services Coordinator, Health Informatics and Health Information Management Program	MEd
Rhona Moses	Kaiser Permanente, Director, Health Information Management	RHIA, CCS-P

<i>Name</i>	<i>Organization/Role</i>	<i>Credentials</i>
Gretchen Murphy	UW, Health Information and Health Information Management Faculty	MEd, RHIA, FAHIMA
Kathleen Nguyen	Seattle Children's Hospital, Director of Health Information Management	MHI, RHIA
Kathleen Peterson	UW, Director, Health Informatics and Health Information Management Programs	MS, RHIA, CPHI, CCS
Clemente Salazar	Smokey Point Behavioral Hospital, Director, Health Information and Privacy Officer	RHIA
Carolyn Spice	UW, Health Information and Health Information Management Faculty	MS, RHIA, CPHQ

Environmental and Occupational Health Sciences External Advisory Committee

<i>Name</i>	<i>Organization/Role</i>
Bob Battles	Association of Washington Business, General Counsel and Governmental Affairs Director
Linda Boyle	University of Washington College of Engineering, Professor and Chair, Department of Industrial and Systems Engineering
Hilary Godwin (ex officio)	University of Washington, School of Public Health, Dean
Lauren Jenks	Washington State Department of Health, Assistant Secretary, Division of Environmental Public Health
Joe Kendo	Washington State Labor Council, Government Affairs Director
Louis Lim	Washington State Medical Association, Medical Director of Quality and Care Management, Occupational Medicine and Internal Medicine
Joel Sacks	Washington State Labor and Industries, Director
Mike Yost (ex officio)	University of Washington, School of Public Health, Chair, Department of Environmental and Occupational Health Sciences

2) 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.

The School holds a formal Academic Health Department Charter with the Washington State Department of Health and a formal Academic Health Department Memorandum of Agreement with Public Health-Seattle & King County (documents provided in the Electronic Resource File for Criterion F). In both cases, these institutional agreements assure the regular and ongoing identification of shared partnership opportunities, academic goals, and focus areas for the Academic Health Department activities. They are also intended to support and inform the practice of public health through linkages to academic scholarship and for public health practice to better inform academic programming and future workforce needs. The Academic Health Departments include advisory committees and opportunities for regular activities, including:

- Discussion on programmatic/strategic directions and research priorities and connections.
- Review of proposed changes to SPH programs and offerings.
- Discussion of perceived workforce needs, interests, expertise, and opportunities.

In addition, the School also has a very well-respected deep and broad reach into local, state, and tribal public health practice partners through the UW Northwest Center for Public Health Practice ([NWCPHP](#)).

NWCPHP is advised by a Regional Network Steering Committee comprised of state, local, and tribal leaders representing governmental public health agencies, primary care organizations, and academic institutions in the Northwest. This Committee meets yearly in Seattle, with virtual meetings and one-on-one calls with partners in between to stay connected to practice needs and opportunities. These Steering Committee meetings include reviews of SPH curricular changes and offerings and provide a regular means for obtaining feedback from practice partners invested in public health workforce development. The meeting agendas frequently include sessions where faculty can present relevant practiced-based research and can develop new partnerships. In February 2019, NWCPHP hosted an online forum for SPH faculty to present proposed MPH curriculum revisions and solicit feedback from this Committee and other interested practice partners.

The School periodically engages directly with public health professionals in the region to identify workforce needs that the School has used for improving the public health curricula. Such engagement at the time of the former Strategic Planning effort, including a multi-day retreat in 2011, was instrumental in launching the gradual re-envisioning of the MPH program. During the development of the School's current Strategic Plan (2020-2025), leadership representatives from both the Washington State Department of Health, and Public Health-Seattle & King County were members of the Strategic Planning Steering Committee, and helped to ensure that strengthening community engagement and community ties is a major action area identified in the new Plan.

The Health Services: Community Oriented Public Health Practice MPH (fee-based) engages a number of community-based clinical faculty to teach part-time in the program. These faculty have direct opportunities to shape the curriculum and ensure its continuing relevance to current practice, by participating in faculty meetings and retreats for the program.

The reach of SPH is global as well as regional and national, mainly through the work in the Department of Global Health (DGH). External constituents are engaged with regularly, including the Centers for Disease Control (CDC) and the World Health Organization (WHO). These organizations provide feedback on SPH graduates and the strength of the curriculum both directly and indirectly, for example, by hiring SPH graduates or selecting them for fellowships. The DGH also engages annually with its External Advisory Board for feedback on curriculum and how it meets the needs of international partners and organizations with a global reach. DGH also obtains feedback from international partners on reciprocity of relationships, especially where those partners provide training opportunities for UW students in the global health field.

During the re-envisioning of the MPH degree, significant input was obtained from committee members and practice partners. Examples include:

- An all-day retreat was held on January 22, 2019 that included committee members as well as practice partners, and the overall curriculum and individual courses were discussed in detail. Practice partners noted the strengths of UW MPH graduates in data analysis and recommended adding coursework in data management. This has been incorporated into the MPH Common Core curriculum. A new data management course was developed and approved, and it will begin to be offered in the 2020-2021 academic year.
- A webinar was held by the NWCPHP on February 26, 2019 to solicit feedback on the new MPH Common Core curriculum from the public health practice community across Washington state. There were 23 attendees from different geographic regions who provided comments on the proposed course content. Among comments, the emphasis on 'calling out racism, privilege, and social class in addition to health equity' was commended and a recommendation to also include intersectionality was made. This and several other recommendations have been incorporated into the new MPH Common Core.

3) Describe how the school's external partners contribute to the ongoing operations of the school. At a minimum, this discussion should include community engagement in the following:

a) Development of the vision, mission, values, goals and evaluation measures

The SPH Advisory Board contributes to the overall mission, vision, values, and goals of the School. The Board, listed in F1.1, is comprised of community leaders who are champions of public health. Board members foster closer ties between SPH, the philanthropic community, the corporate sector, and the greater regional community. The Board offers strategic advice to the Dean with a focus on raising awareness, building affinity with external audiences, and attracting resources to the School.

SPH recently completed its 2020-2025 Strategic Plan. Several external stakeholders were included on the Strategic Planning Steering Committee (as noted in Criterion B). Members for this Steering Committee were:

<i>Name</i>	<i>Department or Program (or Role)</i>
Emily Allen	Global Health, staff
Helena Archer	Epidemiology, student
Joseph Babigumira	Global Health, faculty
Jared Baeten (Chair)	Vice Dean, faculty, alumnus
Sarah Cave	Health Services, faculty, alumna
Alison Fohner	Epidemiology, faculty, alumna
Jo Gallagher	Health Services, staff
Victoria Gardner	Assistant Dean, staff, alumna
Uli Haller	Assistant Dean, staff
Kimberly Hay	Manager of Strategic Initiatives, staff
Patty Hayes	Public Health-Seattle & King County, external partner
Jeff Hodson	Director of Communications, staff
Megan Ingram	Assistant Dean, staff
Liz Kirk	Epidemiology, faculty, alumna
Linda Ko	Health Services, faculty
Sarah McCarthy	Accountable Care Organization, external partner, alumna
Paj Nandi	Washington State Department of Health, external partner
Jennifer Nelson	Kaiser Permanente, external partner, alumna
Esi Nkyekyer	Environmental Health and Occupational Sciences, faculty, alumna
India Ornelas	Health Services, faculty, alumna
Patricia Pavlinac	Global Health, faculty, alumna
James Pfeiffer	Global Health, faculty
Amanda Phipps	Epidemiology, faculty, alumna
Juanita Ricks	Director for Student and Academic Services, staff
Ali Rowhani-Rahbar	Epidemiology, faculty, alumnus
Nancy Simcox	Biostatistics, faculty
Charles Stevens	SPH Advisory Board, external partner
Tim Thornton	Biostatistics, faculty
Jacqueline Valdez Gonzalez	Public Health-Global Health, student
Jon Wakefield	Biostatistics, faculty
Mike Yost	Environmental and Occupational Health Sciences, chair

b) Development of the self-study document

The SPH body (Self-Study Oversight Committee) responsible for the creation of the Self-Study Report invited participation from a wide range of individuals whose work is important to SPH, including students, faculty, and staff as well as external partners. The external partners included SPH alumni, emeritus and retired faculty, and key community partners. The Self-Study Oversight Committee included student members who also played a consultative role in the development of the Report.

Additional materials included in the Electronic Resource File:
Electronic Resource File\Criterion_F\1.4.

c) Assessment of changing practice and research needs

A new School-wide Public Health Practice Council is being created and will begin meeting in Autumn Quarter 2020. Members include representatives from each School of Public Health department, the associate dean for public health practice, and the director of the Northwest Center for Public Health Practice. The proposed mission of the Council is to:

- identify needs, develop, and implement School-wide strategies to support academic public health practice (APHP) in the School
- develop and execute a workplan to progress on APHP elements of the 2020-25 Strategic Plan
- identify ways to continue or develop new partnerships to improve APHP in areas that include student and workforce training, research, and public health outcomes
- catalyze interdisciplinary collaborative APHP efforts by sharing information and linking faculty from various departments, UW schools and colleges, and the practice community

The Council will consider inviting members of the practice community to join once things are stabilized in public health post the COVID-19 pandemic.

In addition, SPH faculty regularly invite external partners to deliver seminars or guest lectures in their classes and receive insight on an ad hoc basis into changing practice and practice-engaged research needs. For example, insights concerning molecular epidemiology in practice were brought to both undergraduates (in EPI 201: Outbreak Investigation and Response) and to graduates (in EPI 594: Field Epidemiology: SEAL Team) by guest lecturer Krisandra Allen, Molecular Epidemiologist with the Washington State Department of Health. A topical example on public health emergencies was brought to EPI 594: Field Epidemiology: Student Epidemic Action Leaders Team, by Hilary Karasz, from Public Health-Seattle & King County. Several clinical faculty speak to the Community-Oriented Public Health Practice MPH (COPHP) students for example in a second year policy case. These included Marc Stern, former medical director of the Washington State Department of Corrections, discussing public health in the jail system.

d) Assessment of school graduates' ability to perform competencies in an employment setting

Assessment of SPH graduates' ability to perform in employment settings is conducted at both the SPH-level as well as the department and program level through alumni surveys (see Criterion B for additional details). In addition, the Department of Global Health solicits feedback from hosts of internships and practicum experiences, to further assess current students' ability to perform competencies in an employment setting.

An outside consultant was hired to conduct a market research survey for SPH in the 2019-2020 academic year to provide guidance for ongoing revisions of the MPH programs. The consultants surveyed 12 employers of MPH graduates, and a selection of graduates from the MPH program to ascertain skills sought in new employees as well as strengths and weaknesses of preparation for SPH graduates. Notable strengths were many, but the consultants were able to identify skills gaps that have been shared with SPH administrators to promote future program development and/or modifications. The gaps were both general (leadership, communication, and administrative skills) and specific (statistical programming language R and policy development).

Some programs have additional opportunities for ensuring and assessing graduates' ability to perform in an employment setting. For example, the Graduate Coordinated Program in Dietetics in Nutritional Sciences is required to provide opportunities for supervised practice for a student to become a registered dietitian. Students work as dietetic interns in various clinical and public health settings, and these experiences are often very similar to employment. Assessments of these opportunities are a formal part of the program. In the COPHP, each student works on a community-based capstone project and receives direct, constructive feedback from their community partners.

4) Provide documentation (eg, minutes, notes, committee reports, etc.) of external contribution in at least two of the areas noted in documentation request 3.

Materials included in the Electronic Resource File:
Electronic Resource File\Criterion_FVF1.4.

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

Strengths

- NWCPHP is a strength of SPH in this area. Its long history of working closely with public health partners is well known, and the Center is well respected by partners. In particular, Dr. Bekemeier, as director of NWCPHP, has fostered and nurtured close and growing collaborations between public health partners and the School. The School leadership, including the associate dean for public health practice, have grown these relationships and reciprocal partnerships were of particular importance during the early months of the COVID-19 pandemic.
- The School is particularly proud of its COPHP program that has continued to attract extremely diverse and capable students committed to public health practice. The direct participation of some external partners in the teaching program has cemented the two-way relationship.
- Other regional, national, and global partners are another key strength to the School of Public Health, offering engagement with faculty, staff, and students alike in key areas of curriculum, research, and practice. The SPH is fortunate to work with organizations such as Public Health-Seattle & King County, the Washington State Department of Health, the Association of Schools and Programs of Public Health, the CDC, and the WHO.
- SPH holds a formal Academic Health Department charter with the Washington State Department of Health and a formal Academic Health Department Memorandum of Agreement with Public Health-Seattle & King County. These agreements support and strengthen existing formal and informal collaborations related to student training and staff professional development; research development, dissemination, and implementation; as well as evaluation support for health department program improvements, among other activities.

F2. Student Involvement in Community and Professional Services

1) Describe how students are introduced to service, community engagement and professional development activities and how they are encouraged to participate.

Students learn about community engagement and professional development opportunities and are encouraged to participate through various mechanisms. At the School level, the Office of the Dean has a manager of experiential learning, whose job it is to link both undergraduate and graduate students with these types of activities. Several graduate programs have required or optional capstone projects as culminating experiences, and others have required or optional internships. At the program level, students are introduced to experiential learning opportunities at student orientations and through their student advisers. For example:

- The Public Health-Global Health majors require all students to complete a culminating service-learning capstone
- The Environmental Health major requires all students to complete a community internship as a culminating experience
- All MPH students are required to complete a mentored, field-based practicum project
- The COPHP students not only complete a community-based capstone project, but also, as part of the program's problem-based-learning pedagogy, students work with community partners on specific current practice problems for the community partner during the day-to-day curriculum

To enhance professional development activities for students, the School has encouraged participation in a small grants program offered through the UW Office of Minority Affairs and Diversity. Over the last few years groups of students, or a student in concert with a faculty mentor, have applied for grants for projects relevant to their professional development. For example, during the 2019-20 academic year, the outcome of a seed grant was a two-day workshop on the National Institutes for Health (NIH) diversity supplement process, with a program officer visiting from Washington DC to present to researchers, faculty, and students across several departments. Another seed grant partnership enabled a student and advisor to conduct a qualitative review of the most recent SPH climate survey that had produced negative responses about climate, but without the detail that a qualitative study would provide. Finally, a third example allowed a group of students to form a critical learning community and fund a writing retreat (their grant was offered by the UW Resilience Lab). The students' work was accepted as a poster presentation at the most recent UW Teaching and Learning Symposium, presented virtually (due to COVID-19) in April, 2020.

Students have also been supported in presentations as part of professional development that are coordinated within the School. Effective communication being a critical skill in public health, it is honed by opportunities for students to present their work. UW opportunities include:

- SPH Undergraduate Symposium (both service and research projects are highlighted)
- MPH Practicum Symposium
- Stand and Deliver capstone event of the COPHP MPH
- EOHS (Environmental and Occupational Health Sciences) Research Symposium
- Undergraduate Research Symposium
- Undergraduate Spring Celebration of Service and Leadership
- UW Husky Leadership Initiative Portfolio presentations

All campus-based opportunities for service and professional presentations are encouraged and supported by faculty and staff advisors at the School as part of their regular advising and mentoring meetings with students.

The SPH Mentor Program, in its pilot year, connects junior/senior undergraduates and second year graduate students across SPH. This program offers undergraduate mentees an opportunity to learn from graduate students about professional development and other topics. Those relevant to service include: getting connected with various public health networking events both on campus and in the community, providing topical expertise and insight about field experience, or receiving feedback projects. Additionally, graduate students have an avenue to share their insight and experience, and to grow their own leadership skills.

Students also present widely at local and national conferences, an essential part of service and professional development for students at all degree levels. At the encouragement of students and advisors, a workshop was created and led on: “APHA 101: Submitting an Abstract Poster,” in February 2020. There were 13 graduate students that attended this workshop.

2) Provide examples of professional and community service opportunities in which public health students have participated in the last three years.

The Student Public Health Association (SPHA) is a University-registered student organization comprised of all SPH students, and maintains two standing positions as Professional Development Officers (one graduate and one undergraduate). These Officers engage public health professionals from across areas of practice to serve as panelists and invited guests to discuss public health practice opportunities.

Another student leadership opportunity for selected Public Health-Global Health students is working as Public Health Dawgs (PHDs). [“Dawgs” is a reference to the University mascot, a Siberian Husky/Alaskan Malamute.] The PHD students conduct outreach on behalf of public health, serve on committees that support the major, the School, and their student cohorts. They have been strong representatives on behalf of the School and through their services have expanded the capacity of the program while gaining and improving their presentation and leadership skills.

The School participates across health sciences initiatives such as the annual Seattle & King County Free Clinic Days to promote interprofessional training and service opportunities. This multi-day event supports direct services and resources to anyone struggling with sufficient financial resources to access healthcare services. The opportunity allows students to support individuals seeking medical, dental, vision, and related services. This is an annual event. Other opportunities that have come to students as a result of the health sciences collaborative is participation in the student-led [UW Chapter of the Health Equity Circle](#) organization. SPH students interested in health equity fit naturally within the charge of the organization. Through the Health Equity Circle, students have another opportunity to join with other students from UW to speak with legislators during the legislative session each year regarding budget priorities.

The School organizes student participation in an annual Legislative Education Day organized by the Washington State Public Health Association (WSPHA). At the invitation of the WSPHA, students attend a part-day training about the Association’s legislative agenda for the year and then attend individual and group meetings with members of the legislature to educate them about the public health priorities for the State budget. The School has been organizing this professional advocacy and education event annually since 2014.

Through collaborative efforts of a Health Science Service Learning Advocacy (HSSLA) group, public health students participate in meetings throughout the academic year. Through collaborative relationships in the Center for Health Sciences Interprofessional Education (CHSIE), which coordinates the Interprofessional Active Learning Series (iPALS), the iPALS engages students from across the health science schools in cross-disciplinary scenarios to promote collaborative interprofessional approaches to healthcare. Students from across the Schools’ programs are encouraged to participate, although all MPH students are required to attend at least one each year.

Another CHSIE initiative supports student access to service opportunities on a mobile health van that was purchased and equipped to provide direct service opportunities for students while benefiting local communities. One recent project included a public health student participating in the early stages of outreach and assessment of a new service site: one of the Tiny Village sites that have been developing in Seattle to address its housing crisis.

As a Health Resources and Services Administration (HRSA)-funded Public Health Training Center, NWCPHP supports students working on practice-based projects in public health organizations. Stipends are distributed directly to students and are intended to help them defray living expenses during their hands-on training experience. NWCPHP collaborates with SPH faculty to market this opportunity to students and screen the applications based on public health practice focus, attention to underserved areas and populations, and feasibility: <http://www.nwcphp.org/partnerships/northwest-public-health-training-center/student-projects>.

The annual Anti-Racism Conference for Health is organized by the Students of Color for Public Health, a student affinity group of SPH undergraduate students interested and passionate about equity and social justice.

Public Health Week Day of Service is another opportunity. The Student Public Health Association (SPHA) organizes a day-long service activity at a local site or in connection with a local agenda attached to public health week each year.

The MLK Day event in the Pioneer Square and Othello neighborhood community is hosted through a local nonprofit, and SPH students are invited to participate. The group served lunch to 50+ at [Hope Place](#) and a similar number at the [Men's Shelter](#) in 2019.

In addition to these ongoing activities, UW Public Health students have been exceptionally giving of their time to support the COVID-19 pandemic response. SPH students across all departments engaged with state and local public health agency partners as well as on the UW campus. Projects have included: case and contact investigation data support, electronic system stand-up support, drive-through testing support, and quality control.

Additional departmental/program opportunities over the last three years are included in the table below.

<i>Department</i>	<i>Students participating</i>	<i>Brief description of opportunity</i>
Epidemiology	MPH	<ul style="list-style-type: none"> ▪ UW Food Pantry ▪ Panel of students and alumni discussed firearm risks with local Chinese immigrant community ▪ Monthly discussions sponsored by Center for AIDS Research and Public Health-Seattle & King County (PHSKC)
Global Health	MPH PhD	<ul style="list-style-type: none"> ▪ Entre Hermanos, a Seattle-based community organization that serves gay Latinx individuals, to evaluate their services and expand peer navigation ▪ Ministry of Health in South Africa collaboration to evaluate a community-based approach for delivery of mental health services
Health Services	MPH alumni MPH-COPHP	<ul style="list-style-type: none"> ▪ Cathea Carey was invited to present her work at the Black Doctoral Network conference in 2018, and the department supported her travel ▪ Marissa Jackson completed a public health internship at the Bill & Melinda Gates Foundation in the summer of 2018 ▪ The COPHP practicum consistently elicits more projects from PHSKC than there are students because the work of these students is highly valued by this agency ▪ The capstone projects the students conduct have influenced the quality of jail health, local public health's approach to improving food quality, the strength of evidence available to state legislators in health impacted assessments of proposed legislation, access to Medicaid services for low income families, and how the state incorporates an equity lens in purchasing health care, among many other issues ▪ Courses incorporate projects requested by local and state public health agencies and advocacy organizations. For example, in HSERV 552: Health Policy Development, project groups have worked on value-based purchasing strategies for the state Medicaid agency, equity policy for the state employee health insurance program, and integration of primary and mental health services
Nutritional Sciences	Undergraduate	<ul style="list-style-type: none"> ▪ Visits to Carnation Farms to work the vegetable gardens, gaining a first-hand look at growing organic food in a major urban area, and the work being done to teach about healthy food and sustainable food systems
Public Health Genetics	MPH	<ul style="list-style-type: none"> ▪ Engagement in practice/application of skills with the Food and Drug Administration, The Fred Hutch Cancer Research Center, and Sage Bionetworks
Public Health-Global Health	Undergraduate	<ul style="list-style-type: none"> ▪ Work shifts supporting young adults experiencing homelessness in an emergency shelter ▪ Prepare meals at Bailey Boushay House, a long-term care facility for people with HIV/AIDS and those needing end-of-life care for other chronic conditions ▪ Elizabeth Gregory Home, a drop-in center for women experiencing homelessness, where students prepare meals and provide social support for women on their journey to improve their lives ▪ At New Horizons Ministries, students support people experiencing homelessness by helping the organization provide food, shelter, case management, and permanent housing ▪ The Vulnerable Population Strategic Initiative conducts programmatic, scientific, and case-based evaluations to assure that the Emergency Management System provides the best possible care to all King County residents, students conduct workshops on emergency services, support curriculum development, aid in evaluation efforts, and how to access 911

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

Strengths

- SPH is deeply committed to experiential learning as evidenced by several staff positions within the School devoted to engaging students with experiential learning opportunities (e.g., manager of experiential learning, and several program-level advisers who are highly knowledgeable and committed to connecting students with field-based projects of interest).
- Additional strengths include: the offering of capstone options as culminating experiences for degree programs, and the continued support of community-based connections and efforts (with “community” in this context being local, regional, national, and global).

Weaknesses and Plans for improvement

- Currently, SPH does not maintain a mechanism to systematically track data such as numbers of students who receive project grants, present at local and national conferences, or to obtain information on student involvement in community and professional service. Going forward, centralized data collection and evaluation in this area will be overseen by the new associate dean for evaluation and improvement.
- The SPH would benefit from improvement in information-sharing around field placements. Having a more consolidated picture of field placements would help the programs create more bundled field experiences to benefit both students and agency partners. The manager of experiential learning and the associate dean for public health practice are working toward such a coordinated approach in the 2020-2021 academic year.
- The School consolidated tracking student leadership service on School and University-wide bodies, beginning in 2017. As the 2020-25 Strategic Plan evolves to further a student-centered culture, the School will expand tracking and evaluation of opportunities provided to students and the impact of these contributions to their personal and professional development. Going forward, centralized data collection and evaluation in this area will be overseen by the new associate dean for evaluation and improvement.

F3. Assessment of the Community's Professional Development Needs

1) Define the school's professional community or communities of interest and the rationale for this choice.

The professional communities of interest for the School include a wide range of public health researchers and service providers both domestically and internationally. Examples of these are: research and public health practice-based epidemiologists, environmental and occupational health specialists, biostatisticians, clinical and public health services researchers and providers, public health organizational managers, healthcare leaders and information system professionals, and other community health workers. The justification for including these professional communities in the School's definition is that the School is large, complex, and diverse—training a broad range of current and future professionals across fields of public health.

2) Describe how the school periodically assesses the professional development needs of its priority community or communities, and provide summary results of these assessments. Describe how often assessment occurs

The School uses various strategies for assessing the professional development needs of its priority communities. Examples include:

The Northwest Center for Public Health Practice (NWCPHP) regularly conducts workforce training needs assessment of this Region's four-state U.S. Department of Health and Human Services (HHS) Region 10 (Alaska, Idaho, Oregon, and Washington); and has long played a leadership role in assessing and addressing regional public health workforce development needs in the Northwest. Training needs assessment data are systematically collected through region-wide surveys approximately every three years. Public health and primary care practice partners assist in facilitating survey development, survey refinement, pilot testing, and outreach. As a long-standing HRSA-funded Public Health Training Center, NWCPHP also has extensive experience within the Region conducting workforce training needs assessments with local, state, and tribal public health, as well as with primary care professionals. These assessments include systematic, qualitative data collection among rural and tribal partners, regular feedback and guidance obtained through the NWCPHP Regional Network Steering Committee, and feedback from the membership on state-level workforce development workgroups around the Region. All of these activities are used to assure deeply practice-informed workforce development activities to meet the needs of public health professionals.

In March 2019, NWCPHP hosted a webinar for SPH and practice partners to hear from the de Beaumont Foundation on their efforts in public health workforce development, and to explore the latest findings from [PH WINS](#), the only national survey of public health workforce skills and professional development needs. The presenters compared national and Region 10-specific findings and helped spark conversations about recruitment and retention, and specific training needs and resources in this Region. NWCPHP is also collaborating with the de Beaumont Foundation to help distribute the next round of this survey (in 2020) to all the small and medium local health departments within the Region, which has not previously been done. NWCPHP knows that national organizations have trouble effectively engaging small jurisdictions, and are excited for the opportunity to help bridge these partnerships.

In the fall of 2019, Region 10 conducted interviews with many of the small, rural local health departments (LHDs) to learn more about organizational and individual training priorities, preferred training modalities, their experience with workforce training offered by NWCPHP, and barriers to training and workforce development.

It was found that, unlike their larger peers, these small LHDs in Region 10 are particularly driven by what they are required to learn and maintain capacity around. They use small incentives to help their staff get training, including continuing education units. State-wide training mandates, like those that have come with public health modernization laws in Oregon, have tapped into this gap in training to allow small LHDs to go beyond training that is 'required,' thus, allowing for—and explicitly encouraging more—capacity-building around things like health equity. The NWCPHP is using the findings from this assessment to guide training efforts and rural reach. NWCPHP has also presented results at local and national conferences and are recognized for their expertise in meeting rural public health practice training needs.

At the end of the Summer Institutes offered by the Department of Biostatistics, the department conducts a survey whose purpose is partly to evaluate the teaching, but also to receive suggestions for new topics that attendees feel would be beneficial for their professional development. These suggestions are used to inform selection of modules in future years.

The Environmental and Occupational Health Sciences department recently conducted a survey at two professional conferences soliciting opinions on its undergraduate curriculum. Questions asked about the workforce preparedness skills that should be taught to undergraduate students to equip them for becoming successful professionals. This survey was also sent to all alumni to learn their perspectives on how their education prepared them for their careers. It asked alumni to identify the professional development needs they did not gain through their coursework. Feedback from the survey was shared with the department's undergraduate oversight committee for evaluation.

The Department of Global Health assesses the professional development needs of global health researchers and practitioners through ongoing discussions with applicants, alumni, and collaborators.

The Health Services MPH and PhD programs assess professional development needs by consulting with the community partners who employ graduates of those programs, including Seattle Children's Hospital, the VA Puget Sound Health Care System, and Public Health-Seattle & King County. Many department faculty members have employment or appointments with these groups, providing ongoing opportunities to assess community needs, and adjust program and professional development activities as necessary.

In Nutritional Sciences, for the training of Registered Dietitians, faculty partner with community-based preceptors to support the continued competence of preceptors. Feedback from preceptors is sought annually via a survey. Feedback from interns about preceptors is obtained as the students move through each rotation.

Additional materials are included in the Electronic Resource File:
Electronic Resource File\Criterion_F\F3.2.

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

Strengths

- The strengths of the assessment of professional development needs include the frequent engagement of students, faculty, and staff with public health stakeholders external to the UW. Partners at the state and local level provide regular information on their professional development needs to the School, as well as to the NWCPHP.

F4. Delivery of Professional Development Opportunities for the Workforce

1) Describe the school's process for developing and implementing professional development activities for the workforce and ensuring that these activities align with needs identified in Criterion F3.

NWCPHP plays a leading role in the School's professional development activities for the regional public health workforce. The overall scope of current NWCPHP activities includes providing technical assistance to state and local health departments, as well as primary care leaders and other stakeholders; facilitating collaborative research between practice and academia; serving as a clearinghouse of support and training resources; facilitating inter-organizational linkages; coordinating practical field placements for public health graduate students; and developing trainings, including intensive on-site trainings.

In addition, several departments and interdisciplinary programs within SPH have specific processes for workforce development activities, with details provided below.

Biostatistics teaches short-courses in "[Summer Institutes](#)." There are four: Summer Institute in Statistical Genetics, Summer Institute for Big Data, Summer Institute for Statistics and Modeling in Infectious Disease, and Summer Institute for Statistics for Clinical and Epidemiological Research. These Summer Institutes offer short-courses for individuals working in various institutions nationally and internationally. Scholarships are offered, based on need.

The *Environmental and Occupational Health Sciences* department recently started a mentoring program for alumni from the Bachelor of Science major to mentor current undergraduate students. This program provides alumni in the workforce the opportunity to develop mentoring skills while providing valuable practical engagement opportunities for students. The mentor program has completed two cycles of matching undergraduate students to Environmental Health alumni, and have received positive feedback from mentors and students alike. Mentors are matched with one or more students to answer questions about their careers, provide advice and feedback on internship and job searches, and develop working relationships with pre-professionals. Through its NorthWest Center for Occupational Health and Safety (NWCOS), the department serves as a resource to business, labor, and practicing occupational health and safety professionals in the HHS Region 10. A major component of ongoing outreach to the Region involves multiple modes of delivery of continuing education.

Based on input from stakeholders, the *Department of Global Health* (DGH) considers development of short-courses, degree programs, and other opportunities for discussion. Information is sent to alumni regarding course offerings from the DGH e-learning group. DGH faculty and staff regularly consult with graduates and global health partners. Recurring themes are discussed at leadership meetings and, if appropriate, the program will implement courses or opportunities for professional development for current students or alumni. Additionally, the department manages "[eDGH](#)," which provides online courses to non-matriculated students in groups or individually as a fee-based program. Many of the courses are for working professionals on topics such as project management or monitoring and evaluation. This program is grant-funded. DGH also receives grant funds to manage two centers: ITECH (International Training and Education Center for Health) and Health Alliance International (HAI), who work closely with Ministries of Health and communities in the global south to provide workforce professional development. Both programs have conducted extensive trainings for research and implementation in response to community and Ministry of Health needs.

Health Services responds to partner input and student requests when developing and implementing professional development activities for both current and future workforce needs. For example, HSERV 572: Planning, Advocacy, and Leadership Skills, was developed in response to feedback that graduates needed more practice-based skills. The *Health Informatics and Health Information Management* program is responsive to requests from the community for speakers and presenters at professional workshops. For example, Connie Montgomery, Counseling Services Coordinator, was invited to speak to the Washington State Health Information Management Association on mindful self-compassion in May 2018; and John Hartgraves, Senior Lecturer, was invited to speak on cybersecurity to the Seattle Health Information Management Association, in July 2020.

The *Nutritional Sciences Program* provides intern and preceptor training opportunities. For example, at the conclusion of each quarter, clinical managers are provided with intern feedback on their staffs' precepting skills. Based on student comments, the Nutritional Sciences relationship with the preceptors is either retained for another year, including partnering with the preceptor to develop or strengthen specific skills and manage expectations, or discontinued as deemed necessary and appropriate. Anonymous feedback from previous interns is provided to potential future interns to help them evaluate if the assigned preceptor is the best fit for their learning needs. These proactive preparation practices to align the students' skills and expectations with choice of preceptor have proved effective in increasing the success of a placement.

2) Provide two to three examples of education/training activities offered by the school in the last three years in response to community-identified needs. For each activity, include the number of external participants served (ie, individuals who are not faculty or students at the institution that houses the school).

Assessments reveal that leadership and management skills and training continue to be in high demand among the public health workforce, and two of NWCPHP's flagship programs: the Northwest Public Health Primary Care Leadership Institute, and the Public Health Management Certificate, address these gaps. Many SPH-affiliated faculty teach and present in these programs.

Development of Leadership Skills

For 15 years, NWCPHP has had a [Public Health-Primary Care Leadership Institute](#). Since 2015, the Institute has been focused on health equity and life course, supported by a grant from the Health Resources and Services Administration Maternal and Child Health Bureau (HRSA MCH). From 2015 through 2018, 81 health professionals from across the HHS Region 10 (and beyond) benefited from this intensive, popular Institute and brought these benefits to their agencies and the field. Through three on-site, in-person sessions, as well as distance-based learning, the program uses innovative, group-based, problem-based learning techniques throughout, as well as practice-based leadership projects, faculty and peer coaching, interactive presentations from public health/MCH leaders, and alumni mentoring.

In 2019, NWCPHP worked closely with the Northwest Regional Primary Care Association ([NWRPCA](#)) to adapt and develop the Institute into one focused on a public health/primary care collaboration to meet population health improvement needs. This was done to be responsive to health system transformation efforts toward a greater population-level health impact and to support public health's transition from direct service to population-focused efforts. The transformed program launched in January 2020 and intentionally includes public health and primary care professionals working collaboratively to advance health equity across the life course. Deep organizational partnership between NWCPHP and NWRPCA directly reflects the public health/primary care collaborations the program is facilitating. The 24 participants in this first 2020 cohort included attendees from local and state health departments, public health agencies, community health centers, tribal health systems, and community-based public health organizations.

The [Public Health Management Certificate](#) focuses on skills that provide structure and consistency within an organization, including budgeting, planning, staffing, conflict negotiation, and interpersonal understanding. Participants work on projects that help build a culture of excellence and have immediate impacts for themselves and their organizations. NWCPHP is working to further incorporate and actualize principles of health equity into this program so scholars can better address health disparities and the social determinants of health in their work. Notably, the program is making efforts to better align with and operationalize the action items from the School's EDI Action Plan (see Criterion G), to help scholars better respond to complex community needs in the programs they manage (certificate begins September 2020).

Hot Topics in Practice

NWCPHP regularly produces and delivers live webinars, including a popular [Hot Topics in Practice](#) series, which has, since 2004, provided a monthly channel for dissemination of innovative practices and emerging issues relevant to public health practice. Topics that this series focused on in 2018 and 2019 included change management, systems thinking, [addressing homelessness](#) (which featured SPH Dean Hilary Godwin), responding to a Measles outbreak, data visualization, a public health approach to the opioid crisis, working with tribes, becoming a chief health strategist, and many others.

Hot Topics in Practice maintains a dedicated and constantly growing audience in the Northwest, even while competing with increased workloads of public health workers and other training opportunities and demands on their time. As the need for training is high, and many public health departments do not have the resources to send their staff to trainings, many participants in Hot Topics in Practice have expressed their appreciation for this series, which allows them to learn about important public health topics without additional cost to their organization or having to travel.

In post-session evaluations, participants also frequently state that they share the materials from these webinars with their colleagues and stakeholders. In 2017, Hot Topics in Practice saw an average of 99 attendees per session. Of those attendees, 73 percent were from Region 10, 33 percent worked in a rural area, and 43 percent worked in a medically underserved community. In 2019, Hot Topics in Practice audiences grew into the several hundreds with the January 2020 session on suicide prevention in rural communities hosting 600+ attendees during its live session. These webinars are also recorded and archived, providing easy access for practice partners, students, as well as inclusion in School of Public Health courses.

Supporting Tribal Public Health

In the fall of 2019, NWCPHP published a new online resource, [Collaborate with Tribes: A Public Health Toolkit](#), which provides an introduction to non-tribal public health professionals on how to understand tribal expertise and partner with tribes and tribal members. The Toolkit encourages learners to understand how historical events shape the health of tribal communities today, discusses important components for successful collaborations, and provides examples of public health projects and programs by or in collaboration with tribal nations to better promote health equity. NWCPHP staff co-presented this material with the content expert from the Washington State Department of Health at a regional tribal public health conference, to about 25 attendees, and are considering possibilities for future online training development to support tribal public health.

Collaborative Development of Trainings in Environmental and Occupational Health

NWCOHS increased outreach to Spanish-speaking workers to reduce fatalities and injuries associated with falls in the construction industry by collaborating with diverse organizations and advocacy groups, such as the UW Latino Center for Health, El Centro de la Raza, and SAIF, Valley Family Health Care (OR/ID Border), Four Rivers Cultural Center, and the Treasure Valley Community College. Since 2016, NWCOHS has seen its classes grow from 3-5 students per class to 25-29. There were 13 classes in Spanish offered at no cost to attendees, and the program successfully trained 187 roofers, laborers, landscapers, painters, construction workers, temporary workers, and carpenters from many small businesses within Region 10.

Additional EOHS trainings have included:

- 890 people received the WSU Pesticide Education Recertification
- 160 people attended the Workshop: Agricultural Safety Day
- 143 people received the Dairy Safety Training: Slips and Trips and Animal Handling
- 400 people attended the 2019 Supervisor Safety Leadership at the WA Contract Logging Safety Conference

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

Strengths

- The rich variety of ongoing offerings by NWCPHP through low-cost cohort programs and no-cost webinars and other online materials demonstrate strength in this area.
- The DGH, with its global reach, is another strength, providing additional opportunities for people in the Pacific Northwest to learn more about global issues in public health.
- NWCPHP also works closely with regional and national partners like the National Network of Public Health Institutes, the Public Health Learning Network, and the nine other federally-funded Public Health Training Centers to develop and disseminate no- and low-cost quality training through the Public Health Learning Navigator and other resources:
<https://www.phlearningnavigator.org/>.

Weakness and Plans for improvement

- Many public health practitioners and public health organizations continually report time and money as the most common barriers to accessing training and professional development opportunities. NWCPHP works closely with practice partners to problem-solve ways to support these needs, including subsidizing training development and program fees through grants and other core funding, and finding sponsors for fee-based programs. For example, the redesign of the NWCPHP Leadership Institute was undertaken with strong support from the Washington State Health Care Authority, which generously donated funds to support some administrative costs of program development and for scholarships to help practitioners from small, rural public health organizations.

Criterion G

G1. Diversity and Cultural Competence

- 1) **List the school's self-defined, priority under-represented populations; explain why these groups are of particular interest and importance to the school; 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.**

SPH identifies underrepresented populations as follows: individuals from racial and ethnic groups that are historically and currently:

- underrepresented (Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Native Hawaiians and other Pacific Islanders, Asian Americans) in public health careers and higher education
- individuals from low-income families or disadvantaged backgrounds
- religious minorities
- first-generation college students
- individuals who identify as disabled
- two spirit/LGBTQIA (lesbian, gay, bisexual, transgender, queer or questioning, intersex, and asexual or allied)
- veterans
- formerly incarcerated
- individuals with refugee status or who recently immigrated

These were chosen because: 1. individuals from these backgrounds have historically been underrepresented in the SPH faculty, staff, and students in comparison to their numbers in the general population; and 2. increased representation and leadership from these groups in the public health profession are essential to eradicating inequities in health in communities, the nation, and the world.

The composite of multiple positions of privilege and oppression impacts how individuals may teach, learn, research, study, work, behave, and serve. Therefore, SPH goals include attracting individuals from these populations and supporting their success and retention in SPH student, faculty, and staff bodies.

These populations were identified based on extensive discussions hosted by the SPH Equity, Diversity, and Inclusion Committee (SPHEDIC), obtaining feedback from faculty, staff, and students. Multiple means to gain feedback occurred for over a year. Common definitions of underrepresented were considered, including those promulgated at the University of Washington Seattle campus, and at federal research agencies that target populations for specific support and opportunities, among others. After thorough consideration, the defined populations are distinct to the SPH mission and vision of inclusivity.

As the State of Washington has been an anti-affirmative action State for over 20 years, hiring and admissions decisions must be neutral with regard to race, ethnicity, sex, color, or national origin. To build a diverse and inclusive student body, many of the School's programs have transitioned to holistic admissions processes. Holistic admissions processes take into account a more fulsome set of personal characteristics as well as academic characteristics to decide who is meritorious for admission. Holistic admissions may include consideration of the GRE, but do not use it as a primary factor.

Health Services moved to a completely holistic admissions process in 2018. Biostatistics has discontinued use of the GRE for admissions, and Environmental and Occupational Health Sciences is changing their rubric so the GRE is not used as a screening tool until the second stage of review. Other departments such as Global Health and Epidemiology have been using holistic admissions rubrics and this change continues to positively impact the diversity of the student body in an upward trend.

2) List the school'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.

During 2019, the assistant dean for equity, diversity and inclusion led a School-wide effort to develop the [Equity, Diversity, and Inclusion Action Plan 2019](#) (EDI Action Plan). The EDI Action Plan fully articulates target underrepresented populations, establishes strategies to increase their representation, persistence, and success, and improve the climate in the School. It builds on the core values of equity: "promote equity and social justice in defining and addressing health and health care," and diversity: "embrace and build on diverse perspectives, beliefs, and cultures to promote public health" that were included in the School's 2012-20 Strategic Plan (see Criterion B).

The EDI Action Plan goals are:

- Goal 1: Organizational Structure
 - To establish an organizational structure for the SPHEDIC that ensures representation across departments and interdisciplinary programs; involving faculty, staff and students; and engenders a sense of shared commitment, responsibility, and participation across the School.
- Goal 2: Curricula and Training
 - To develop and implement multifaceted, evidence-based education and training for students, staff, and faculty so they are able to 1. recognize the means by which social inequities and racism, generated by power and privilege, undermine health and 2. identify public health approaches to eliminating race-based inequities.
- Goal 3: Recruitment
 - To actively develop and implement innovative approaches to improve recruitment and hiring of diverse faculty and staff, and recruitment and matriculation of students.
- Goal 4: Retention and Promotion
 - To develop and execute comprehensive and sustainable activities to retain and promote a diverse faculty, staff, and student body.
- Goal 5: Climate
 - To cultivate an institutional climate that welcomes diversity, supports and promotes inclusion, and provides safer learning, mentorship, and work environments that allow students, staff, and faculty to deconstruct individual, interpersonal, and institutional barriers to equity.
- Goal 6: Data
 - To collect, collate, analyze, and disseminate data that can be used to develop metrics to measure outcomes in a timely fashion, and establish accountability and transparency.

For each goal, the EDI Action Plan articulates specific action items, a targeted due date for completion of the item, and the individual in the School responsible for ensuring that the action is completed. SPH is also in the process of developing a new public-facing dashboard to track progress of these action items.

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-specific data; convening stakeholder discussions and documenting their results; and other appropriate tools and strategies.

Organizational Structure

The SPHEDIC was created in 2012. Originally named “The Diversity Committee,” it was chaired by a faculty member, named as Diversity Champion. Membership included departmental representatives and other SPH staff, faculty, and students who wanted to improve the equity, diversity, and inclusion practices in the School. The charge of that first Committee was to develop and advocate for policies and initiatives that would improve the diversity of the SPH community. Priorities were set each year for curricula; faculty, staff, and student recruitment and retention; and climate and strategies to address the priorities were nominated and refined through discussion and consensus in the full Committee or in one of its working groups. In the first year, evaluation metrics were established, and accountability measures advocated. A *Critical Voices* event series was launched. A Handbook of Best Practices for Faculty Searches was developed by the University of Washington, and all new search committees were oriented as to how to incorporate these best practices. The human resources team in the Office of the Dean continues to monitor and track accountability in these searches.

See materials in the Electronic Resource file:
Electronic Resource File\Criterion_G.

The SPHEDIC continues to meet monthly during the academic year. At the beginning of every year new goals for that year are set, to provide focus for the work. Working groups develop each of the priorities established. In addition to committee members, other faculty, staff, and students join the working groups. In 2016-18, working groups focused on: 1. a School-wide competency adopted for all students; 2. an ambitious strategy to launch a new center for anti-racism and community health; and 3. to establish an assistant dean-level position for the School.

Meeting that third goal was a major milestone. In 2018, the SPH appointed an assistant dean of equity, diversity, and inclusion (EDI), as a resource to the entire School on matters of anti-racism, equity, diversity, and inclusion. The assistant dean of EDI now chairs SPHEDIC. In 2020 a new co-chair of the committee was named, with particular responsibility around implementing universal anti-racism training for SPH faculty, staff, and students. The SPHEDIC also serves as a clearinghouse for best practices used in the academic departments or in other schools, and provides trainings to faculty and staff.

Several SPH departments and programs established their own EDI committees to further the work of creating programming around diversity, equity, and inclusion. Some committees hosted informal talks such as “Diversi-teas,” which covered a wide range of topics, including racism, sexual harassment, and religious intolerance. Some departments, such as the Department of Environmental and Occupational Health Sciences (DEOHS) funded a Graduate Staff Assistant (GSA) position to work with and support the committee during the 2016-17 academic year, this position has continued each year thereafter.

The SPHEDIC and all departmental committees have engaged in successful collaborations with partners on the UW Seattle campus and external organizations to provide supportive learning and working environments for all students, faculty, and staff. SPH has worked closely with the UW Graduate Opportunities and Minority Achievement Program (GO-MAP), the UW Latino Center for Health, the UW Office of Minority Affairs/Diversity (OMAD), the UW Center for Teaching and Learning (CTL), [The People’s Institute for Survival and Beyond](#), and other groups to provide curriculum, training, and support to faculty, staff, and students in EDI.

Curricula and Training

In April 2016, the SPH Curriculum and Educational Policy Committee (CEPC) took steps to influence the learning environment and adopted an anti-racism competency, to recognize the means by which social inequities and racism, generated by power and privilege, undermine health. The competency was approved for adoption School-wide with the intent that all SPH students should be able to “discuss 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.” The process and events that led to this new competency are best described in the article published in [Public Health Reports: “Adopting an Anti-Racism Public Health Curriculum Competency: The University of Washington Experience”](#) by Dr. Amy Hagopian (Health Services) and colleagues. The strategies to develop and evaluate this required competency across the School are tailored to each program.

A process to track how the competency is being met was not established when the competency was adopted. The need for accountability has been recognized, and the assistant dean for equity, diversity, and inclusion is now an ex officio member of the CEPC. Full-scale implementation and ongoing tracking processes are anticipated.

For the MPH state-supported degrees, beginning in Autumn Quarter 2020, PHI 511: Foundations of Public Health and PHI 516: Public Health Practice, faculty will teach the CEPH diversity competency and provide assessments (see also Criterion D1 and D2).

Two new courses related to health equity and racism are also being developed. The first is a course on Special Topics: Indigenous Topics in Health to be taught by new faculty and returning alumni Myra Parker in Spring Quarter 2021. This course is a crucial addition to SPH offerings and will meet one of the course requirements for the Certificate for American Indian Indigenous Studies that is offered through the UW Department of American Indian Studies. A second class on African American Health Disparities is being planned as well, under the coordination of Ahoua Koné, who is the new co-chair of SPHEDIC and a clinical faculty member in Global Health.

Training faculty on building inclusion, facilitating difficult conversations, and integrating diverse content in the classroom are all high priorities for the School. For several years now, faculty have been offered training in how to teach with racial equity in mind. This four-hour training on anti-racism has been a component of the Teaching Learning Sharing professional development series for faculty and staff for at least three years. SPH continues to offer this training as a way for faculty to build on their skills and cultural proficiency. The Department of Epidemiology recently developed a [toolkit](#) that provides faculty with guidance on how to modify their classroom teaching and course materials to reflect EDI and anti-racism principles. The creators of this toolkit conducted a [webinar](#) for instructors across the School in August 2020 and the [toolkit](#) is now available on the SPH web site.

In Spring Quarter 2020, the Dean committed that the School would implement universal anti-racism training during the 2020-21 academic year for faculty, staff, and students in SPH. Under the leadership of the assistant dean for EDI and co-chair Ahoua Kone, the SPHEDIC, at the time of this writing, have been working to develop a set of learning objectives for the universal training. They are also piloting and evaluating existing anti-racism training modules, with the goal of making a recommendation to the Dean regarding trainings to implement beginning in Autumn Quarter 2020. In addition, during summer 2020, SPH piloted a training series on InterGroup Dialogue (IGD). This training aims to build a cohort of faculty members who can improve how they facilitate difficult conversations in the classroom. This small group of faculty will be able to work together with IGD experts within the School using the curriculum developed specifically for faculty in health professions. If successful, this offering will be expanded during the 2020-21 academic year.

To bring diverse perspectives to the classroom, SPH encourages instructors to invite speakers from the external community to serve as guest lecturers, panelists, speakers, and invited experts. The lack of incentives has been often stated as a barrier that instructors encounter when considering and facilitating diverse guest lecturers, guest panelists, and other opportunities for bringing diverse perspectives into class. The School is currently crafting a policy that provides honoraria and swag that instructors can offer to non-UW lecturers who come and speak in class or participate as invited experts.

Adoption of active learning and evidence-based teaching (EBT) practices are ways to close the achievement gap for URM students in science courses. These teaching goals are included in the EDI Action Plan. Faculty are being trained on these techniques, building inclusion and diversity into learning objectives, panel presentations, lectures, cases, syllabi, and more through ad hoc events and EBT faculty groups.

There have also been several departmental efforts to strengthen diversity within the SPH curriculum:

- In Environmental and Occupational Health Sciences (EOHS), the GSA conducted an in-depth, critical review and inventory of diversity-related content in all courses required for EOHS students at both the graduate and undergraduate levels. The GSA also conducted student focus groups. The inventory and review process resulted in a final report in 2018 (also included in the Electronic Resource File, Criterion G documents), describing the ways in which the curriculum prepared students to meet diversity-related competencies and identified opportunities for improvement. Students taking ENV H 511: Environmental and Occupational Health also learned how to explain the social, political, and economic determinants of health and how they contributed to population health and health inequities.
- The Department of Global Health offers a class GH 531: Research and Evaluation Methods in Public Health, where students develop and apply awareness of cultural values and practices to the design and implementation of public health policies and programs.
- In HSERV 511: Introduction to Health Services and Public Health, students are asked to propose two actions or initiatives to be included in the final paper that addresses social determinants of health and health equity.

Recruitment

Faculty and staff: To provide context to this priority, data reported in August 2018 suggest that about 6 percent of the faculty and 11 percent of the staff in UW SPH identify as underrepresented minorities (URM).

Priority has been placed on advancing and improving practices and outcomes for faculty searches. An effort to increase bias training for faculty search committees started in 2014. In academic year 2019-20, the assistant dean for EDI, collaborated with the SPH human resources manager and the UW Associate Vice Provost for Faculty Advancement, to offer a two-part training to active SPH faculty hiring committees. The goal of this training is to ensure committees are equipped with an understanding of how bias can play a role in the hiring process, and offering strategies, tools, and resources for mitigating bias and creating shared language for the committee members. The assistant dean for EDI and the human resources manager facilitate the adoption of best practices in faculty searches, including using the University's Handbook of Best Practices for Faculty Searches and the Online Toolkit for faculty best practices for hiring, and expanding the advertising of open positions to more diverse organizations. The assistant dean of EDI met with ten faculty search committees during the 2019-2020 academic year to establish ground work for an inclusive search process, to promote significant outreach to URM candidates, and also establish processes that promote a successful hire for diverse candidates.

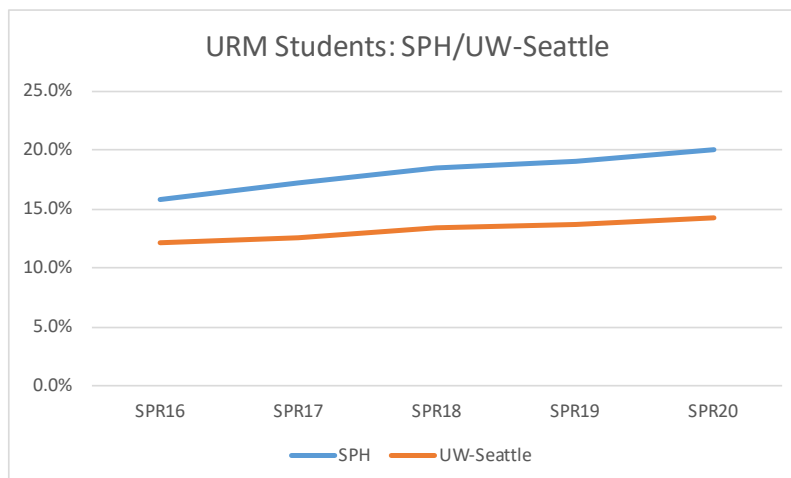
The School has undertaken the search for the inaugural faculty director for the proposed UW Center for Anti-Racism and Community Health (ARCH). Significant UW and SPH resources have been devoted to this search. Clarity around the characteristics of the successful candidate, available School support, and commitment to this position has led to a redrafted position description, a new commitment to a fully tenured-line, and other support. SPH had originally hoped to provide campus visits for finalists in the spring of 2020, but this was delayed due to the pandemic. The School is continuing to consider candidates and is pursuing virtual interview processes. This Center and its director will be a catalyst for generative research and convener of researchers and community partners committed to promoting scholarship, practice, and activism to ameliorate structural racial barriers to health.

Students: In the Office of the Dean, the recruitment and retention of underrepresented students has been a priority for several years. During 2018-2019, EDI leaders, students, and student services staff attended several national conferences focused on the research experiences and academic and professional advancement of URM students. These conferences were: the [University of California-Davis Pre-Health Conference](#), the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science conference ([SACNAS](#)), the California Forum for Diversity in Graduate Education, and the Annual Biomedical Research Conference for Minority Students ([ABRCMS](#)). In addition, SPH representatives attend the national meetings of the Black Doctoral Network conference, and participate in the National Name Exchange ([NNE](#)). These representatives also routinely recruit at the California Forum for Diversity in Graduate Education Graduate Fairs twice annually. Once students are connected with outreach staff at these events, they are connected with faculty and staff in SPH as well as other UW offices such as GO-MAP. The areas of diversity within the national conferences vary: racial, ethnic, sexual orientation, citizenship, ability status, veterans, etc. The vast array of identities captured at these conferences is indicative of the diversity that this School of Public Health serves. The SPH has revised data collection tools for outreach prospects to include the option for students to indicate race/ethnicity, gender, and other characteristics.

In 2017, the SPH became a partner in the Summer Health Professions Education Program ([SHPEP](#)): a free six-week summer program sponsored by the Robert Wood Johnson Foundation to increase diversity in the fields of medicine, dentistry, and public health. SHPEP has a strong track record of bringing students into medicine and dentistry. The public health pathway is fairly new and has already shown signs of diversifying the applicant pool to public health graduate programs by helping to build connections and mentoring relationships with program participants. Ways to strengthen the pipeline for these students toward public health enrollment at the UW are being examined.

Additional financial support is afforded by the Office of the Dean Masters Fellowships that provide financial awards to admitted students, nominated by their departments, and intended to help bolster recruitment of students who are in the SPH UR designations.

URM enrollment within the SPH is higher than the UW-Seattle overall, especially since 2015. The graph below shows URM enrollment over time, compared to the UW-Seattle campus as a whole. Whereas data is collected centrally on URM enrollment, there are no similar sources of data on other underrepresented populations (e.g., first generation students) within the SPH.



Departments and programs have recruitment plans for students that leverage the department's resources, expertise, and partnerships. Several of these efforts are highlighted below:

- The Biostatistics EDI Committee has worked to identify roadblocks to equity in the department. In collaboration with the Biostatistics graduate program, a student peer-mentoring program was created to support students. In addition, the Committee worked to restructure admissions to evaluate students more holistically, relying less on GPA and GRE scores. The department offers an Annual Summer Institute in Statistical Genetics, a summer enrichment program designed to strengthen the statistical and genetic proficiency and career preparation of scholars from all backgrounds, especially those from groups historically underrepresented in STEM (science, technology, engineering, mathematics), such as racial and ethnic minority groups, low income, rural, first generation college students, veterans, differently-abled, and 2SLGBTQ (Lesbian, Gay, Bisexual, Transgender, Queer, or Questioning, and Two-Spirit) groups. This program, now in its 20th year, is another way that Biostatistics is attracting students from diverse backgrounds to the field.
- Biostatistics faculty members are signing up as members of the [Math Alliance](#), together with other UW departments, to be mentors to underrepresented students pursuing doctoral degrees in fields that recruit math majors. Also, as of summer 2020, the department has established a partnership with the Fred Hutchinson Cancer Research Center to also mentor URM undergraduates.
- In 2017, Environmental and Occupational Health Sciences (EOHS) was proud to partner with the College Assistance Migrant Program ([CAMP](#)) on developing hands-on activities for the Math and Science Academic Academy, Dare to Dream ([D2D](#)). Forty D2D students (11th and 12th graders) were hosted in the labs with faculty and graduate students for a week-long experience. Students learned about toxicology, air quality, safe workplaces and workers, and community health and environmental justice.
- The EOHS Environmental Health Research Experience Program (EHREP) had been bringing seven to ten undergraduates from across the country to UW for a funded summer research experience with faculty from 2006 until 2018. The Supporting Undergraduate Research Experiences in Environmental Health ([SURE-EH](#)) program is a two-year funded research experience that supports up to ten underrepresented, UW undergraduate students per year. Participants are selected in their sophomore year and work with faculty conducting paid research (part-time during the autumn-spring quarters or full-time in summer quarter). The final year of the grant cycle for EHREP was 2018, and rather than renew, the department decided to focus on the SURE-EH program instead, as SURE-EH was a longer, richer experience and limited to underrepresented students. In 2017, two former SURE-EH trainees were admitted as Master of Science students to EOHS.
- Each Autumn Quarter, the Department of Epidemiology joins with the Department of Global Health to co-host a Diversity Dinner for accepted students, which provides students the opportunity to ask questions, meet faculty, and re/familiarize themselves with Seattle. This Dinner has been instrumental in helping students decide favorably on accepting admissions to SPH.
- The Department of Health Services established a Health Services Excellence, Equity, and Distinction recruitment and retention fund which offers prioritized financial aid for URM students through department scholarship awards.
- Health Services maintains partnerships and conducts outreach with UW campus partners like the UW Office of Minority Affairs & Diversity, which included UW Education Opportunity Program, [US Department of Education TRIO/Student Support Services](#), College Assistance Migrant Program, and UW Samuel E. Kelly Ethnic Cultural Center, to support students who are URM in applying and matriculating into SPH undergraduate programs.
- The Public Health-Global Health (PH-GH) major cultivates relationships with advisors and faculty at diverse universities, to strengthen the pipeline into SPH programs, including arranging meetings with advisers on campuses serving diverse populations, and expanding the SPH contacts database for annual email marketing messages to colleagues.

- Other collaborations were formed between PH-GH with the UW Office of Minority Affairs & Diversity, specifically the UW Education Opportunity Program (EOP), through the SPH Educational Opportunities in Public Health Program (EOPHP). Academic programming and networking opportunities were created for students with an EOP designation who were interested in health-related career pathways. Other outreach and recruitment highlights include: presenting to [TRIO](#) students; participating in the [MESA](#) High School visit to UW; participating in the adviser “speed date” for the UW Native Student day; meeting and interacting with underrepresented students at the CAMP D2D Summer Resource Fair; and participating in the EOP resource fair. The PH-GH advising team maintains close connections with local community colleges in an effort to connect with students from the two-year college system in the State of Washington into the Bachelor of Arts and Bachelor of Science majors.
- Nutritional Sciences is one of several departments and programs that have been revising their admissions criteria to take a more holistic approach to application reviews.

Retention and Promotion

A Task Force for Faculty Equity (TFFE) was created in 2016 with the charge to annually document the presence and breadth, magnitude, and trends in sex and racial/ethnic equities and inequities in faculty hires, promotion, tenure, service responsibilities, leadership roles, and salary by SPH. It also charges an annual review of departmental salary equity to identify trends and opportunities to advance equity; and to propose immediate and long-term actions to address factors and processes contributing to inequity. Since the TFFE’s last analysis in 2018, the School has worked with departments to adjust salaries to reduce inequities, consistent with the recommendation of the Task Force.

A staff of color affinity group was created in 2019 to serve as a social support group for SPH staff of color. Activities such as quarterly “lunch and learns” help build community to reduce isolation, encourage peer mentoring, and to share cultural perspectives. A similar group for faculty was convened in 2018. This group meets quarterly to support retention and climate, and to create community for faculty of color across the School.

- The School provides a number of supports for SPH students.
 - A New Student Welcome event designed to introduce School and University resources, form inter-departmental connections, and highlight commitments to an inclusive School climate.
 - The Multicultural Student Welcome is offered as an independent orientation event to create a sense of community among students of color.
 - Several efforts have been made to create a QT (Queer, Trans) Public Health interest group. A new group of staff and student leaders are again pursuing this group beginning Autumn Quarter 2020.
 - Endowed scholarships are offered to continuing graduate and undergraduate students based on specific disciplinary focus or identity as well as advising to connect students to further sources of support.
 - A centrally managed tutoring program is available for students experiencing difficulty in core-courses.
 - The SPH mentorship program (piloted in 2019-2020 and continuing) matches undergraduates with graduate students to promote professional development and retention for undergraduates and leadership development for graduate students. Priority for the mentorship program is given to students who are underrepresented in the School.
 - An ongoing partnership with the Graduate Opportunity Minority Achievement Program (GO-MAP) targets quarterly workshops for underrepresented health sciences students.
- All incoming students are assigned a faculty mentor, and students who have been identified as UR are often matched with faculty who have additional expertise working with those populations and who may be more prepared to provide the needed level of support.

- Two student organizations dedicated to the support of underrepresented students formalized their status within the SPH by becoming Registered Student Organizations (RSOs) in 2018: the Students of Color for Public Health (SCPH, for undergraduates) and the Student of Color Affinity Group (SOCAG, for graduate students). These two student groups are supported by the Office of the Dean, and a staff member is assigned to help support the group's annual activities. The SOCAG group also has a URM faculty member as their formal advisor who provides ongoing mentorship and support.

Departments and programs have retention plans for students that leverage their resources, expertise, and partnerships. Several of these efforts are highlighted below:

- In 2017, the School began a partnership with GO-MAP to co-host a lecture in health sciences each quarter. This enables students from different locations on campus to network. An average of 40-50 graduate students of color from SPH attend the quarterly events on a regular basis. This partnership was initiated by Health Services.
- PH-GH has a staff position dedicated to supporting students of color and students with marginalized identities.
- PH-GH established facilitated study groups (FSGs), in addition to assisting instructors with holding office hours and connecting students to tutors. FSGs put a different spin on teaching assistant (TA) office hours in that TAs filter among students, listening in, as the students drive the conversation with the topics and questions on their minds and help answer each other's questions. TAs are there for support and to help guide students. Students benefit by studying with their peers, discussing topics with the support of their TA, and learning from the collective wisdom of the group.

The fifth (climate) and sixth (data) goals are described in sections G1.4 and G1.5 respectively.

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.

Events in 2020, including the murders of Ahmaud Arbery, George Floyd, Breonna Taylor, Tony McDade, and others, and ongoing reports of unequal access to healthcare and disparate outcomes for Black, Indigenous, and Latin/x people during the COVID-19 pandemic has led SPH to engage in deeper anti-racism work as a learning community. In response to the increasing awareness of racism as a major public health crisis, beginning Autumn Quarter 2020, the Dean is implementing a curriculum of anti-racism training for the entire School: faculty, staff, and students. The SPHEDIC is at the forefront of this effort, creating anti-racism learning objectives, identifying resources, and an implementation plan with the Dean. The training is intended to be an ongoing initiative coupled with opportunities to engage in deeper work and structural change.

A culturally competent environment in SPH, identified as a goal in the EDI Action Plan, continues to be cultivated in part through new coursework and revisions of established courses, and in part through ongoing faculty, staff, and student trainings. Several examples of this are included under the *Curricula and Training* section in G1.3 above.

The School has also been proactive in creating spaces for community discussion and dialog through the Health Sciences Common Book activities (reviewed in more detail at the end of this section). In 2019, SPH held key roles to help launch the Common Book, "So You Want to Talk About Race" by Ijeoma Oluo. These efforts included queer-led book club discussion groups for people of color and white people, attended by SPH students, faculty, and staff. A School-wide event in October 2019 with the author drew hundreds of people to join for author talks and meet and greets. The School is

working with colleagues across health sciences to launch the 2020-21 Common Book, “How to be an Anti-Racist” by Ibram X. Kendi with several opportunities for discussion and engagement using race-based caucusing.

Rather than repeating here the curricula and training strategies noted in G1.3 to cultivate an institutional climate that welcomes diversity, supports and promotes inclusion of diverse faculty, staff and students, SPH emphasizes that implementing those strategies is an excellent way to improve climate.

In addition to the advent of new student organizations, and the training and accountability in faculty and staff search and hiring processes, both mentioned above, additional School-wide actions and strategies include:

- The Office of the Dean Student and Academic Services has created multicultural events for students that include different activities centering students of color within the School. These events are meant to build community and provide a space for students of color to feel welcomed and accommodated based on their varying identities.
- The School supported the Students of Color in Public Health (SCPH), who conceived and developed an Anti-Racism and Community Health Conference in 2019. This conference brought together public health professionals, community organizations, as well as members of UW and the Seattle community, to discuss the root causes of health disparity and inequity. Dean Hilary Godwin offered opening remarks, and a keynote was given by a Global Health PhD student. This event set a new precedent for the way the School aims to name and center conversations around race, racism, and anti-racism as it relates to public health.
- As of Autumn Quarter 2019, SPH began requiring all graduate students, paid to serve as tutors for required SPH courses, to take the UW Empowering Prevention and Inclusive Communities (EPIC) training. This training was developed for academic student employees who serve as teaching assistants, tutors, and research assistants. The EPIC training is designed to prevent gender-based discrimination and sexual harassment. The SPH Curriculum and Education Policy Committee has endorsed the practice of requiring this training for all teaching assistants.
- Faculty and student services staff received training in early 2020 focused on disability accommodation processes for students who are persons with a disability (as defined by the UW [Disability Resources for Students](#) Office). The faculty also received training in the new policies on religious accommodation related to absence from class time for religious observance.

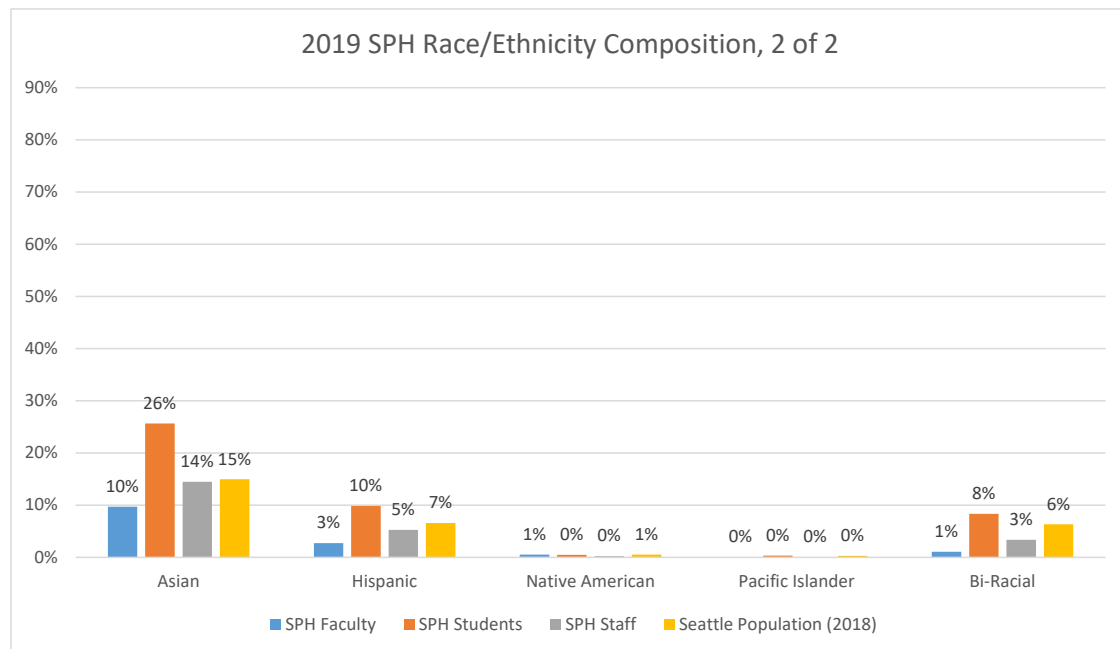
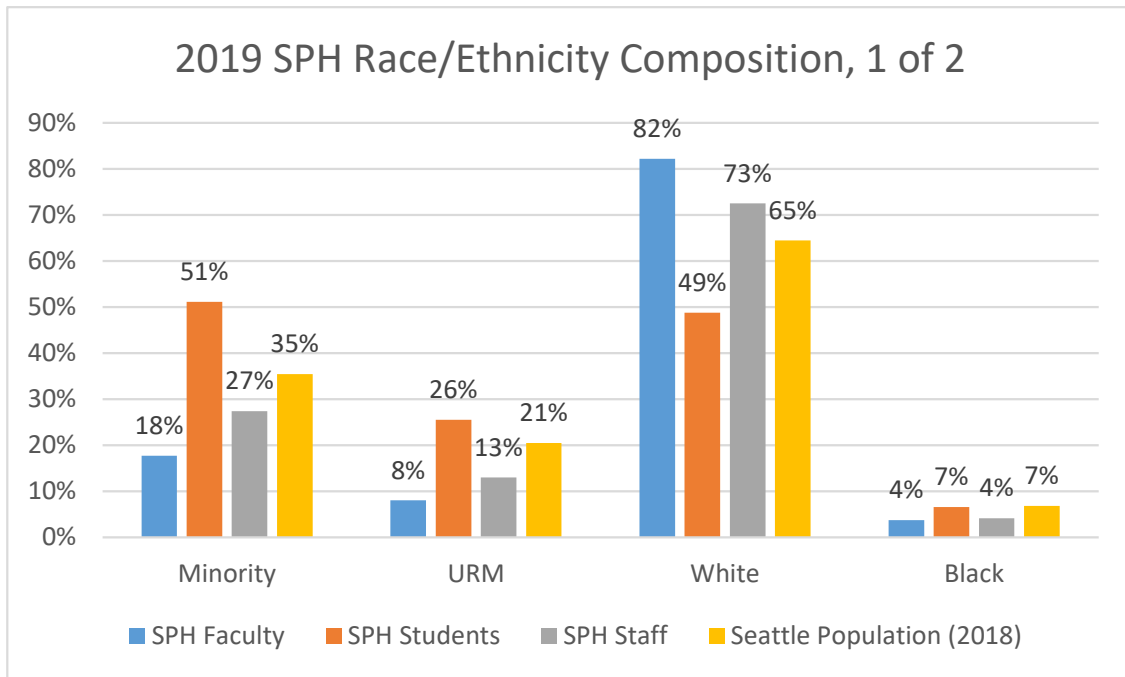
In addition, individual departments and programs have engaged in the following activities and efforts:

- Epidemiology's diversity committee developed a [glossary](#) of EDI terms and an anti-racism [ToolKit](#) to encourage a common understanding of terms in the coursework and other work within the department. This glossary is included in the list of diversity resources available to the entire School. During the summer of 2019, the Epidemiology faculty received training on how to bring greater inclusion into the classroom.
- Global Health (DGH) hosts a departmental diversity committee in which academic program staff participate as active members. Starting in 2019, the DGH curriculum committee has a standing member from the diversity committee as part of its membership. In an effort to diversify the teaching faculty, all new course teaching opportunities are advertised to all regular and annual faculty, and DGH's instructor selection policy includes diversifying perspectives in teaching faculty as one of its core objectives. Efforts to raise awareness on microaggressions among department faculty and staff included a presentation at the faculty and staff meeting in 2018 from the UW Center for Teaching and Learning (CTL). Since 2016, DGH has allotted designated funding for retaining diverse students to the MPH program with great success. Finally, in DGH courses, it is required that faculty include a classroom climate statement in their course syllabi, and quantitative and qualitative feedback on classroom climate is solicited in the student course evaluations.

- Health Services is consistently evaluating their services, courses, and staff/faculty via course evaluations, student surveys, and one-on-one discussions. At multiple points throughout the academic year, program leadership meets to discuss performance in the area of EDI. Opportunities for improvement are discussed and new plans are implemented. Health Services is working to create a climate where students, staff, and faculty feel comfortable bringing EDI concerns to department representatives, with the goal of improving cultural competence throughout the department. Health Services hosts a departmental diversity committee, focused on recruitment and retention of diverse students, staff, and faculty. It frequently reaches out to partner departments and institutions for best practices and resource sharing. Health Services has worked closely with GO-MAP, the CTL, and other UW groups to provide training and support to faculty, staff, and students in the areas of equity, diversity, and inclusion.
- Nutritional Sciences offers the NUTR 400/500: Food Systems, Nutrition, and Health Seminar. This course is required for all graduate students in Nutritional Sciences, is popular among undergraduates, and is accessible to the UW community and visitors. The seminar explores current topics, including the power imbalances and inequality rife throughout the U.S. and global food systems with respect to race, gender, culture, class, immigration status, and other intersections of identity and place. The Autumn Quarter 2019 seminar, co-organized with the UW Food Systems Coalition, explored the diverse intersections and relationships needed to achieve a sustainable, equitable, and just food system. Topics in the course include next generation farmers, worker health, immigration, women and people of color in the food system, indigenous food systems, climate justice, food access, policy, and cultural influences in the culinary world and restaurant industry.
- The director of the Registered Dietitian Nutritionist (RDN) training program is working with professional organizations and colleagues in dietetics to build EDI competencies for dietetic education and continuing education requirements. Current students have been working on projects that add to this body of work, including collecting resources on teaching about racial bias in dietetics.
- The Public Health-Global Health undergraduate program strives to create and maintain a culturally competent environment through its faculty-staff retreats, which are held semi-annually. Topics related to EDI are covered and have included: public health critical race praxis, microaggressions, identity development, pronouns, and land acknowledgement. Faculty are encouraged to incorporate what they learn into the classroom and staff advisors into their roles.
- Each academic year, the students across the health sciences schools are introduced to a Health Sciences “Common Book.” The Common Book is selected to address common themes applicable across the health professions. During the 2018-2019 academic year, the selected book, *Marbles: Mania, Depression, Michelangelo and Me* by Ellen Forney, a book focused on mental health and mental illness. As described above, the book in the 2019-20 academic year, was: *So You Want to Talk About Race?* by Ijeoma Oluo. Events, including author presentations, book groups, class discussions, and topic-specific invited speakers are introduced through both curricular and extracurricular opportunities for SPH students to engage with each other, their faculty, and other students across the Health Sciences about the relevance of these areas to their study and eventual careers.

5) Provide quantitative and qualitative data that document the school’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.

In the figure below, the percentage representation of faculty, staff, students in 2019 and the Seattle area in 2018 (most recent data) are shown by race/ethnicity and selected race/ethnic groups (e.g., all minority, all under-represented minority). The minority category includes both URM and Asian-Americans.



The EDI Action Plan identifies collecting and regularly evaluating data as a goal. Data to monitor and adjust strategies, and data for tracking accountability to stated goals are critical. The proposed new associate dean for evaluation and improvement will be responsible for oversight of the development and implementation of a system for collecting and regularly evaluating data related to both proximal metrics (e.g., number of individuals who participate in specific training programs aimed at improving climate in the School; confidence of individuals in content area pre- and post-training), and distal metrics (e.g., measures of climate; success in recruitment and retention of underrepresented individuals).

An example of where the School has implemented a new program and tracked proximal metrics is around sexual misconduct trainings. The program is designed to improve climate and thereby improve the support for ongoing success of priority populations.

- In Autumn Quarter 2019, the School launched this new training on sexual misconduct prevention for incoming students. The training is innovative in that it involves an evidence-based student-centric approach. About 200 students attended the SPH New Student Orientation (NSO) at the start of Autumn Quarter 2019, and received this training.
- As a result of the success of this effort, a new training coordinator position was funded in the fall of 2019 for sexual harassment prevention across the Health Sciences. Thus far, a total of nine SPH trainings have been conducted; reaching 155 faculty and staff, as well as 175 students.
- Preliminary survey results from the Autumn Quarter pilot training suggest increased knowledge of attendees surrounding issues of sexual harassment.

6) Provide student and faculty (and staff, if applicable) perceptions of the school's climate regarding diversity and cultural competence.

SPH climate surveys are distributed to all faculty, staff, and students. The first SPH climate survey was completed in 2008. Additional climate surveys were conducted in 2017 and 2018. Despite the lower response rates for the 2018 survey (13.8 percent vs. 47.7 percent in 2017) compared to prior years, results followed a consistent pattern with no evidence to demonstrate that the climate had improved since 2008. A number of respondents consistently reported they were less than 100 percent comfortable in the School; especially women, people of color, and those from low-income backgrounds.

The average climate rating for the School in 2018 was 3.55 on a 5.0-point scale. Most of the responses fell between the "indifferent" and "comfortable" ranges. Students rated the climate lowest of all the groups. The percentage of respondents from the 2018 survey who felt "comfortable" or "very comfortable" had not changed substantially from 2008 (57.4 percent) to 2018 (58.6 percent).

In 2018, 22 percent of respondents reported having personally experienced intimidating, offensive, and/or hostile conduct (i.e., harassing behavior). The most common behaviors reported were based on a combination of identity factors: race and ethnicity, gender, position/rank, and age. Microaggressions were the most common offense reported. Not far behind were the number of respondents who said they were excluded from certain activities.

Many people who experienced exclusionary behavior ignored it, avoided the individuals, or did not report it. When asked about how they responded to the behavior, about 23 percent said they told a friend. Almost half (45.9 percent) of all respondents reacted by "ignoring," "avoiding the person," "leaving the situation," or "didn't report." The predominance of the latter is concerning and may be indicative of the discomfort that exists in the School to confront conflict, have difficult conversations, or to give and receive constructive feedback.

Of the groups surveyed, students reported having experienced the most exclusionary behavior in the School. Faculty were reported to be the source of most of these behaviors. This led to a concerted effort on several fronts: to highlight the existence of the student concern policy (described in Criterion H), and to celebrate the use of local resolution where possible. There is also a new policy to include a statement about classroom climate in all syllabi for every course in the School.

Current efforts by the Dean to improve School climate are numerous and strategic. The appointment of an assistant dean for EDI is intended to help provide leadership in the area of improving the SPH climate, increasing diversity, and building a more inclusive community. This position is supported by a 0.5 FTE staff member and a small budget to carry out School-wide activities and support departmental and program efforts. The EDI Action Plan also provides a pathway where all departments and programs, while on different roads, can be journeying in the same direction.

Climate surveys are now conducted every two years. In 2020, the UW conducted a campus-wide climate survey and requested that schools and colleges not conduct their own. The SPH was one of a few units that met their response rate criteria for receiving an individualized school-level report. Results are expected to be shared by the end of Autumn Quarter. The next SPH-specific survey will be conducted in 2022.

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

Strengths

- Based on SPH climate survey results and advocacy within the School, an assistant dean for EDI was added to the School leadership in 2018. The assistant dean's broad charge is positive climate change within the School. The leadership, vision, and strategic alignments evidenced since this administrator joined the Dean's leadership team has been noticeable.
- The School established a Student Concern Policy in 2018 that improved the mechanism to report bias incidents (described in Criterion H). De-identified summaries of concerns submitted are reported out to the Dean's Advisory Council for Students and School leadership on a quarterly basis.
- The SPHEDIC developed the EDI Action Plan, which was finalized and launched in 2019, to help guide School and departmental-level actions to advance toward inclusive excellence. The work, over a period of one year, catalyzed Committee members, students, faculty, administrators, and staff to engage around improving School climate. The plan serves as a guide for SPH EDI priorities. Progress has been made, and continues to be made, in key areas in each of the goals noted in the Plan.
- The anti-racism competency adoption.

Weaknesses and Plans for improvement

- The EDI Action Plan was adopted in July 2019. It is still early to begin to determine its full applicability across the School. The strength of the SPH department and program culture require that the Plan be enacted in keeping with the culture of each department and its diversity committee.
- The School has not made as much progress in diversifying faculty and staff as was desired. Strategies in the EDI Action Plan include broadening the notice of openings, creating recruitment networks, and cluster hires, which are all efforts being pursued with greater accountability under the assistant dean for EDI. Staff diversity may be sought by pushing for the diversity toolkit to become a standing policy for all staff searches (in addition to faculty searches). Now having a Dean focused on EDI issues allows the School to be at the table with other equity and diversity leaders. Across the UW campus, these collaborations are addressing barriers to diversity, enabling innovative ideas to help support efforts to build, retain, and celebrate diversity.
- The lack of accountability in the process of implementation of the anti-racism competency is a weakness. Plans to address it include naming the assistant dean for EDI as a member of the CEPC.
- Better and more consistent data collection and evaluation methods need to be established for a wide range of EDI-related goals. The new associate dean for evaluation and improvement will be responsible for oversight of the development and implementation of a system for collecting and regularly evaluating such data.

Criterion H

H1. Academic Advising

- 1) **Describe the school's academic advising services. If services differ by degree and/or concentration, a description should be provided for each public health degree offering.**

All students are advised by a combination of faculty and staff from the time of enrollment. At the graduate level, these roles are codified by the UW Graduate School, specifically the responsibility of the department's or program's faculty graduate program coordinator ([GPC](#)) and staff graduate program advisors (GPA) to provide ongoing advising of students. The staff roles are both direct-service in support of students as well as providing managerial support to the programs, which gives added depth to their capacity to support students. At the undergraduate level, staff advisors play a more central role in the degree offerings to support student academic progression toward graduation and in identifying supports to promote student success.

Each department and interdisciplinary program has a faculty member who holds the role of GPC, as required by the UW Graduate School, and officially represents the department and graduate educational programs. This person holds formal responsibility to manage the overall student educational program in the department. In collaboration with the GPA, they provide coordination of activities within the department for students and graduate faculty, remain knowledgeable of Graduate School and other policies and procedures relevant to the graduate programs under their coordination, and serve as an intermediary for students, graduate faculty in their unit, and the Graduate School as needed.

In addition to the GPC, students are assigned a faculty advisor when they enter the School. For some students in some programs, the GPC also serves this role. Faculty advisors support students with introduction and customization of curriculum/degree requirements, and providing an introduction to the department learning environment (curricular, research, and extended learning opportunities). For graduate-level students, the faculty advisory typically also serves as a member of the supervisory committee for the student's thesis or dissertation. If the faculty advisor is not the most appropriate person to serve as thesis/dissertation chair, then the individual who becomes the thesis or dissertation chair typically assumes the role of faculty advisor through to completion of degree requirements. One or more other faculty on the advisory or dissertation committee typically share the academic advising responsibility for the student at this stage.

All SPH departments and interdisciplinary graduate degree programs have professional staff (including the GPA) who support the student, faculty advisors, and GPC in ensuring student academic success. These staff have different professional titles, however, their roles typically encompass support to the program (curriculum committee, program committee, admissions committee, student association, among others), data gathering and reporting, academic schedule management, linkages to the Graduate School, the Office of the University Registrar, financial aid offices, and the International Student Services offices, all within the UW. They support events such as orientation and degree milestone celebrations, may play a role in facilitating student applications for external or departmental funding opportunities, provide support of student life and development, and provide other resources that provide meaningful engagement in the student experience. The GPA works in tandem with the chair/GPC to provide continuity of support and resources both within the department or program and across the UW.

At the undergraduate level, students are advised by staff advisors, as mentioned. The staff advisors at this level typically have credentials in higher education. While each program also has a faculty coordinator or director, their role is generally to provide program oversight. The staff advisors provide registration, resource, and referral support and may have responsibility to provide program and scheduling support. Staff in these roles help students manage and track degree requirements and identify additional, non-required learning opportunities that enhance their academic experience. Typically, advising is done by any of the advisors by appointment or drop-in rather than through advisor assignments. This allows students to develop relationships with an advisor or receive advising based on best fit for their availability.

In addition to their support of the majors, staff advisors assist students by identifying resources and referral opportunities, providing career advising, connecting students to departmental/program leadership opportunities, advising student organizations, and planning milestone ceremonies and events. Advisors also have administrative responsibilities. These include keeping updated with respect to revised programs, policies and procedures, maintaining student records, and supporting students submitting applications to graduate.

Undergraduate advising staff meet with prospective students who may be taking required courses for a major under consideration. Across campus, staff advisors assist with orientation advising for all new students, and develop orientation activities to introduce the students to the School, department, and major, including pre-major opportunities.

SPH staff advisors have a collaborative, undergraduate student services group (the “USS Awesome”). This collaborative has developed capacity to serve on outreach across the programs, join together to provide an introduction to the field of public health, and plan and hold an experiential learning symposium. There are substantial examples of the benefit of having this core of professional staff in the collaborative not only to the students, but also to the advisors themselves, and to the program.

2) Explain how advisors are selected and oriented to their roles and responsibilities.

Faculty advisors are selected initially for each incoming graduate student by the GPC in the student’s home department or program. Where possible, advisors are matched with students based on student statements in the application for admission, and common interests between students and faculty members, as determined by the GPC. The GPC generally aims to spread out the student advising responsibilities across the faculty in the department in an equitable fashion.

Faculty advisors learn their roles and responsibilities from their own mentors and from the GPC. Orientation and guidance provided to faculty advisors includes an overview of the Graduate School requirements as needed (typically supported by student services staff), as well as added trainings in mentorship through the Graduate School and through the SPH Teaching, Learning, Sharing series (workshop on mentoring provided by the School, as noted in Criterion E). Trainings are also provided to faculty and staff by various UW student affairs offices such as the [Disability Resources for Students](#) office, training centers such as [Forefront Suicide Prevention](#), and via the Association of Schools and Programs of Public Health (ASPPH) webinars on topics such as holistic admissions review practices, and redeveloping a graduate student orientation, among other student success topics.

Faculty serving on the student thesis or capstone committee for a master's student or on the dissertation committee for a PhD student are chosen by the student, and approved by the GPC. To be eligible for service, the faculty member must be a member of the UW Graduate Faculty. This membership is achieved after being nominated by their department or program faculty, confirmed by a quorum majority vote of the faculty, and then formally appointed by the Dean of the Graduate School. An additional endorsement is required to be eligible to chair a doctoral supervisory committee, awarded to those faculty "deemed to be important to doctoral education" by their department. Similar nomination and voting processes are followed. [Guidelines](#) for the UW Graduate Faculty and Doctoral Supervisory Chair roles are defined by the Graduate School.

Staff advisors at both the graduate and undergraduate level are hired based on experience managing academic programs, providing program support oversight, and experience working with students. They are typically hired by a panel of student services administrators and faculty program directors. Hiring processes often include interview panels with students, advising staff, and program directors who all provide feedback on the candidates to the hiring manager.

Staff advisor positions typically require at least a bachelor's degree in public health, education, psychology, or other related fields, and two to three years of professional experience. In the SPH, staff advisors typically outstrip minimum expectations and have master's degrees in public health, social work, counseling, education, or other disciplines. They are also required to have relevant experience in advising or recruitment, or in other areas relevant to student affairs, including guidance and counseling, career counseling with college students, and in mental health settings.

In addition to orienting to the program requirements and accreditation, staff advisors are trained in UW policies, data systems, and advising theory. Advisors are introduced to campus services units that work with their program faculty and students, and advising professional organizations that provide ongoing training and opportunities to advance campus services and programs for students. For instance, at the UW Graduate and Professional Advisors Association ([GPAA](#)) kickoff event each year, staff advisors who work with graduate students are introduced/reintroduced to service units in the UW Graduate School, as well as other areas critical to student success and retention. These include the fellowships and grants office, financial aid office, and UW libraries special services. At the quarterly all-advisors meetings and UW Office of the University Registrar (OUR) monthly meetings, advisors learn of revisions to UW policies, new campus services or projects, and related information relevant to support their practice for SPH students.

3) Provide a sample of advising materials and resources, such as student handbooks and plans of study, that provide additional guidance to students.

Materials are included in the Electronic Resource File:

Electronic Resource File\Criterion_H\H1.3.

4) Provide data reflecting the level of student satisfaction with academic advising during each of the last three years. Include survey response rates, if applicable.

The University of Washington Graduate School conducts a survey of graduating students each year, that includes questions about satisfaction with advising and mentoring. Exit survey data shows strong student satisfaction with advising since 2017. Response rates from master's students were 59 percent, 53 percent, and 54 percent over the last three years. The corresponding satisfaction rates were 3.4, 3.0, and 3.5 (scale of 1.0-4.0). Response rates for doctoral students were 44 percent, 66 percent, and 81 percent over the last three years. The corresponding satisfaction rates were 3.8, 3.6, and 3.5 (scale of 1.0-4.0).

The UW Office of Educational Assessment administers the Student Experience in Research University ([SERU](#)) survey on a biennial basis. Results from the most recent survey show modest participation by public health undergraduate students, but positive responses to questions about the quality of faculty and departmental staff advising. The mean responses were 4.4 (faculty) and 4.3 (staff) in 2019 (n = 85 respondents), in 2019, 4.4 (faculty) and 4.5 (staff) in 2017 (n = 96 respondents), and 4.4 (faculty) and 4.7 (staff) in 2016 (n=48 respondents). In earlier survey administrations, the participation rate was reported. SPH appreciates that the low response rate may raise some credible questions about the value of these data. There are no other comprehensive surveys of student satisfaction with advising administered to all SPH students.

5) Describe the orientation processes. If these differ by degree and/or concentration, provide a brief overview of each.

New student orientation activities are hosted both centrally within the School, and within departments and programs. These events give students the opportunity to understand the services available from the School and the UW; to get an idea of the general curriculum in their programs; to meet faculty, staff, and continuing students; to learn important policies and practices; to begin to develop foundational skills where needed; and, to participate in creating a community of learners.

The orientation activities hosted by the School are available to all entering students each autumn quarter and are organized by SPH student and academic services staff and the equity, diversity, and inclusion team within the Office of the Dean. The activities allow students to learn about major resources across the UW, as has been stated, to meet members of the Office of the Dean, and to hear about major developments underway in the School. There is an introduction to the Health Sciences Common Book (reviewed in Criterion G), which is used in both curricular as well as co-curricular opportunities for students. Beginning with the 2019-20 academic year, under the support of the assistant dean for equity, diversity, and inclusion, a training on sexual harassment prevention has been included for students in attendance. Beginning with the 2020-2021 academic year a universal anti-racism training will be offered to all entering students, coordinated by the School's Equity, Diversity, and Inclusion Committee and under the leadership of the assistant dean for equity, diversity, and inclusion. The School will also offer a series of learning technology workshops for entering students to introduce the Zoom and Canvas learning environments that many will be experiencing for the first time.

In normal years, an all-student picnic is another orientation held just a few days before the start of each Autumn Quarter, designed to give students an opportunity to mix, meet additional faculty and staff in the School, and to create community. This event is managed by student and academic services in the Office of the Dean. Student organizations are given an opportunity to introduce themselves, recruit members, and build excitement about their activities. Beginning with the 2018-19 academic year, a multicultural student welcome is hosted for entering students by the assistant dean for equity, diversity, and inclusion. This event offers students an opportunity to begin building communities of affinity groups, and identify faculty and staff supports across the School available to promote and support them throughout their educational experience. This event will not be held in 2020 due to restrictions on group gatherings from the COVID-19 pandemic.

A math skills workshop is also available for entering graduate students who opt to have a review on math skills to support their performance in some of the more quantitatively-focused courses. The workshop concludes with a facilitated introduction to the R programming language. Students find this orientation session helpful in both building skills and easing anxiety about graduate study. The facilitators use the workshop as an opportunity to encourage and remind students of learning supports such as study groups, teaching assistant office hours, tutoring supports available through departments, as well as time management strategies.

At the department or interdisciplinary program level, the content of the orientation is tailored to the culture and expectations of the department or program. Students are expected to attend departmental/program orientations to be introduced to faculty and staff, and to relevant policy and curricular requirements. Some unique components of the department and program orientations are noted below.

- The Department of Biostatistics hosts an orientation workshop focused on computing resources and arranges for all entering students to do a University-sponsored gender discrimination and sexual harassment training. Tailored modules for each of the department's degree programs include a pre-arrival online information, support, and phone conversation (if needed); two one-on-one meetings in the first two weeks; mid-quarter small-group check-in meetings; and end-of-quarter small-group check-ins and celebration. Biostatistics hosts a session with the union that represents students, and starting with the 2019-20 academic year, new international students receive a GPA/student-designed and presented "New International Student Orientation."
- The Department of Environmental and Occupational Health Services hosts an internship orientation session for Occupational Hygiene students, and includes an all-department kickoff event as another community building opportunity across its programs. An informal student-to-student social is also hosted and open to all students.
- The Department of Epidemiology has a specific orientation on student leadership opportunities, an introduction session with the union that represents graduate student employees, and breakout sessions by each separate degree program hosted by faculty and students in the program tracks.
- The Department of Global Health hosts a specific welcome event for students of color and an orientation for international students.
- The Department of Health Services hosts a technology workshop session, and breakout sessions about case-based learning for students in the Health Services: Community Oriented Public Health Practice MPH degree. Continuing students lead breakout question and answer sessions.
- The Health Informatics and Health Information Management program orientation includes several segments on team development and formation, as well as professionalism. It includes activities to develop and reinforce these concepts as part of the orientation.
- Both the Master of Health Administration and Master of Health Informatics and Information Management students have an orientation that includes "[ropes courses](#)." These exercises are seen as foundational because both programs rely heavily on team-based instructional formats.
- The Nutritional Sciences program extends orientation over two weeks. Comprehensively scheduling students to attend sessions with student services staff, faculty, academic success workshops, introduction to field work, and required trainings.
- The Public Health Genetics (PHG) program uses student panels to address many issues related to funding, student life, and strategies to select elective coursework. As an interdisciplinary program, PHG builds in multiple departments and schools in a coordinated way, so this approach provides a distinct advantage in navigating the partner organizations that host the program.
- The Public Health-Global Health (PH-GH) major hosts orientations for students where program and degree requirements are covered. Orientations occur in Autumn and Winter Quarters, which correspond with admissions cycles. Additionally, PH-GH hosts registration workshops for students entering the major prior to the quarter in which they start to assist students with course registration and addressing their questions.
- Beginning in Autumn Quarter 2020, the MPH Common Core will hold an orientation for all entering MPH students, in the state-supported degrees. This orientation will allow students to begin to socialize to the group format of instruction, and other notable opportunities in this new curriculum.

Autumn Quarter 2020 orientation activities are being held in a remote format. While many students are in the local area, health department guidance discourages gatherings that can otherwise be held in a remote format. Orientations will include both synchronous opportunities for entering students as well as several extended workshops that may be attended or viewed asynchronously by students who may be in different time zones or may have time conflicts with the synchronous offerings.

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

Strengths

- The collaborative of SPH undergraduate program student services, USS Awesome, meets regularly to collaborate on student, School, and UW campus issues that can be cooperatively addressed to strengthen the undergraduate experience across the School. This has led to a common platform for admissions applications to some of the majors, a common approach to office hours for prospective students, and joint outreach and recruitment activities. USS Awesome provides a great model of collaborative advising work that honors the individual requirements of each program while coalescing the skills, energy, and insight of each team to produce a more seamless experience and knowledge-base that positively impacts students.
- The engagement of advisors with support units across the UW creates a substantial benefit for students. Advisors are aware of and participate in creating campus-wide programming that SPH students are able to benefit from, though these programs may not be feasible to house within the School. For instance, advisors serve on the leadership of the UW Diversity Leadership Conference and students from the School have opportunities to engage with student leaders, presenters, and speakers from across campus. Also, the engagement of student services staff with the Health Sciences Service Learning Advocacy Committee (HSSLA) as well as the Health Sciences Diversity Outreach Collaborative and the Career Advisors group, among others, enrich SPH staff's capabilities. Student and staff engagement with these groups also helps to facilitate SPH students to connect to initiatives and efforts across the health sciences, including student service and outreach opportunities. For instance, a PH-GH student served on HSSLA and had the opportunity to join the outreach team investigating a new community relationship for a mobile health van.
- Other collaborative groups across the School have engaged with one another to work cooperatively on student outreach, recruitment, curriculum, and course scheduling. These meetings have opened the door to sharing best practices across the School, which has created more consistency in the student experience within departments. An annual retreat of student services staff has provided a vehicle to work on inter- and intra-departmental communication issues. It also offers the opportunity for improved collegial networking that improves the student experience with cross-School efforts. Advisors in SPH are ready collaborators and willing to share their knowledge and experience with their colleagues.
- The experience and ongoing professional engagement and development of SPH advisors through UW organizations and other networks keep advisors in tune with ongoing developments on campus in the relevant areas of student affairs practice. Their professional backgrounds lend depth to the roles they play. For instance, advisors with academic or professional experience with career counseling or training can build out rich career resources for the students in their programs. Advisors with professional experience in social work have been instrumental in networking and expanding the capacity of their programs to engage ready resources for students who run into trouble during their program or to proactively engage with students and introduce supports that may forestall problems.

Weaknesses and Plans for improvement

- Students anecdotally report that advising practices are uneven across the School, although actual survey data presented above suggests satisfaction with advising. Improvements in advising would follow were faculty to be consistently engaged around advising theories and approaches. The UW Graduate School provides some support for faculty mentoring. However, there remains an opportunity within the School to more substantively and more consistently engage faculty around advising and mentoring. Staff within some departments are given the freedom to employ broadly the professional and academic background that enhances the student experience. Their backgrounds and expertise can be tapped more to support the development of practices and understanding that positively impacts the experience of students in the School.

- At the undergraduate level, the partnership/collaborative through USS Awesome lends greater evenness to the practices and knowledge base of all advisors. It also provides a collaborative approach that extends the reach of all of the programs, though their staff-to-student ratios differ substantially. Nascent groups coming together to build cohesive or complimentary practices around outreach will similarly support the positive growth of this area, in keeping with the longstanding group that meets to discuss curriculum and course scheduling. Overall, there is no similar vehicle for graduate advising (neither a collaborative nor a strategic working group). The work to share practices and collaborate is therefore ad hoc at the graduate level. The opportunity exists to establish a working group on graduate advising that would provide a similar structure to extend the reach and knowledge-base of those working with graduate students.

H2. Career Advising

- 1) **Describe the school'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.**

Career advising services are supported in a range of ways across departments and programs, at the School-level, and at the University of Washington. All enrolled students have access to advising, professional organizations, engaged faculty and staff, community partners, and alumni even when formal programming is not provided by a department.

Examples of the range of services offered by departments and interdisciplinary programs are provided below.

Biostatistics

- Employs a full-time GPA who provides individual career and internship counseling, resume and cover letter reviews, and salary negotiation to support students across all of the degree programs offered by the department. Additionally, the GPA offers advice on application materials, conducting informational interviews and networking, interviewing and public speaking, salary negotiation, and workplace expectations/dress codes/etiquette; manages online resources regarding internship and career searches across a number of different employment sectors; and hosts guest speaker events for students to meet and learn from alumni, senior students, students who have had internships, and faculty.
- Coordinated or facilitated by the graduate program and with the collaboration of local alumni, senior students or faculty (core faculty or affiliates), Biostatistics holds orientation sessions around career topics (e.g., Summer Institutes (noted in Criterion F), developing a curriculum vitae, etc.). Also, the GPC or faculty advisors provide career counseling on a one-one-one basis. The department also hosts orientation sessions around how to apply for an NIH (National Institutes of Health) F31 or NSF (National Science Foundation) graduate training grant. In 2018, the department also hosted their first Colloquium that featured presentations by alumni and senior students, and opportunities for networking with members of the local biostatistics community in academics, research, and industry.

Environmental and Occupational Health Sciences

- A full-time career development staff person provides individual career counseling to support students across all academic programs within the department. Additionally, the department facilitates several professional development initiatives, including opportunities to meet with employers and alumni, learn from previous interns/students, and to network. Undergraduates complete a Career Exploration and Internship Preparation course, in addition to completing internships within the field for academic credit. The department also runs a Graduate Professional Development Workgroup of graduate students who complete an intensive job search boot camp where they learn how to write targeted application materials, practice interviewing, and develop their professional communication and salary negotiation skills. Finally, the department maintains job and internship boards, has a professional development email campaign, and supports Internship Buddy and Alumni Mentoring programs.

Epidemiology

- Students look to their faculty for career guidance, networking, and mentorship. Many students develop career opportunities through research assistantships, thesis, dissertation, and practicum work, based on the connections they make through those activities. As with students from all SPH departments, Epidemiology students have access to the career services available through the UW and the SPH Office of the Dean.

Global Health.

- The student services staff take the lead with career services in Global Health. A part-time professional staff adviser offers one-on-one career planning and job search support; hosts workshops and events; conducts outreach to local organizations to identify student, alumni, and trainee opportunities; and develops resources and handouts. Within the MPH program specifically, faculty and staff provide career counseling individually and as part of required curriculum. Three sessions per year are held where alumni return to campus to share information about their career pathway with current students. A mentoring program linking current students with alumni supports job resource sharing as well.
- Within the Pathobiology doctoral program, students are introduced to career pathways in academia, government, biotech, and nonprofit organizations. First-year students take a survival-skills-for-scientific-research seminar which supports career development skill building, offers career panels, and the creation of an individual development plan which is modified annually during their academic program. Faculty are instrumental in graduates securing postdoctoral training, which is a typical pathway for these students.

Health Services

- For the MPH, MS, and PhD programs, the majority of career advising throughout the department is done by faculty. Students have faculty mentors assigned to them from their day of matriculation, and those faculty members begin the career advising process by working with the students on establishing goals, developing career interests, and support planning. Students are supported by staff that send job listings, organize professional development activities, and refer students to services at the School and UW.
- The Bachelor of Health Informatics and Health Information Management program employs a faculty advising and a professional staff advising team. Services include a job and opportunity board, placement support, professional mentoring, professional portfolio development, career mapping, resume review, tools workshops and support, alumni contact, preparing for credentialing exams, and networking.
- The Master of Health Information and Health Information Management program (MHIHIM) has a full-time dedicated staff member in a professional development specialist (PDS) role. The PDS provides career and academic advising and develops and delivers programming tailored to the needs of their students. Programming includes workshops, individual coaching, and coordination of professional mentors and peer mentors. The MHIHIM's accrediting body, the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM), tracks job titles and employment rates for recent graduates.
- The Master of Health Administration (MHA) and Executive Master of Health Administration (EMHA) degree programs each have a full-time dedicated staff member in a PDS role. Each PDS provides career and academic advising and develops and delivers programming tailored to the needs of students. Programming includes workshops, individual coaching, and coordination of professional and peer mentors. The MHA and EMHA programs also have a part-time practitioner-in-residence (faculty) who provides further programming related to professional development and industry knowledge and who works individually with students to meet their career goals. These programs routinely share relevant job opportunities with the MHIHIM program in Health Services, and faculty routinely invite guest speakers from the practice community into the classroom. Most MHA students complete a paid summer internship between the first and second year, and the MHA program works closely with them throughout the process of finding and completing the internship. Although MHA, EMHA, and MHIHIM work collaboratively with current, graduating, and recently graduated students on job searches, the MHA program also works closely with graduating students and recent alums to help them find and secure positions in healthcare administration. The percent of MHA students placed within 90 days of graduation is a key metric associated with the MHA's Commission on Accreditation of Healthcare Management Education (CAHME).

Nutritional Sciences

- Career advising and professional development activities are robust for graduate students enrolled in the Registered Dietitian/Registered Dietitian Nutritionist (RD/RDN) training program, which currently make up 85 percent of enrolled graduate students. In-person sessions are held at least quarterly with the director of the training program. In class, students engage with experts and with each other on a range of topics, including professionalism, code of ethics, reflective learning, professional development portfolios, resumes, storytelling, making first impressions, interviewing, dress codes, negotiations, networking, and engaging with professional organizations.
- Within the Food Systems, Nutrition, and Health undergraduate major, career advising takes place through individual advising appointments with the staff adviser and informally with program faculty. Advising topics include wayfinding, networking, linking to opportunities, graduate school planning, building skills, and connecting to UW resources. As a new major, much work is done with pre-majors and prospective students in helping them understand what career opportunities might exist with a major in food systems, which is an emerging area, as well as understanding the function of a liberal arts degree in equipping graduates with skills that translate to any number of employment areas. Gathering employment needs locally and regionally as the major engages with an external advisory group is also key to current efforts.

Public Health Genetics

- In one of the Public Health Genetics (PHG) required courses, invited practitioners from across public health fields talk about a specific issue at the intersection of public health and genetics. It provides students with a greater understanding of how and where their PHG degree can be applied. Students also have networking opportunities that arise from these visits. In the PHG seminar, faculty affiliated with PHG give presentations about their research. These talks have provided opportunities for students to connect directly with faculty for research assistant positions in a broader range of fields.
- PHG faculty regularly counsel students on their career goals and plans and help facilitate connections with their networks. At their first one-on-one meeting, advisors ask each student specifically about their career goals to help guide them through the program. These discussions help students connect with practicum sites (some of which have transitioned into jobs) and have allowed faculty to connect students with alumni, colleagues, practitioners, and industry professionals.

Public Health-Global Health

- Career advising in this undergraduate major takes place through individual advising appointments with Public Health-Global Health advising staff or the UW Career and Internship Center and through workshops in and outside of the core courses. Topics for workshops include exploring personal values, building professional relationships, resumes and cover letters, informational interviews, searching for graduate programs, and networking opportunities with alumni. In addition to public health career advising, students have access to services at the UW (see below). In 2017 the major instituted an alumni council. The council provides a source of feedback for the program from recent alumni, helps to serve or identify volunteers for student panels, and develops alumni-to-current student networking opportunities. A mentoring program was recently developed to support students studying in the global health option of the Public Health-Global Health major.

SPH Office of the Dean

- The SPH student and academic services (SAS) staff work directly with students and recent graduates by providing some advising and by guiding student organizations who do career and professional development programming. Most notably, SAS provides the online and backend infrastructure for job and opportunity postings which engages community partners, employers, advisers, and students. A weekly digest compiles a range of opportunities and is sent to all enrolled students. Online resources are provided to cover career development tools like resumes, cover letters, letters of recommendation, and negotiation strategies. SAS brings department and program staff together in a workgroup which operationalizes one to three collaborative programs

each year. In the 2019-20 academic year, an SPH graduate-to-undergraduate student mentoring program was piloted.

- The School's communication team, in conjunction with departments and programs, manages the School of Public Health Student and Alumni LinkedIn account. Additionally, this group manages job postings which are available to alumni and the community.
- The School's advancement team convenes a network of staff and administrators from across the School who support connections and engagement with alumni. These meetings offer opportunities for strengthening and strategizing about service and connections between alumni and the School. Most of this engagement leads to department level opportunities and connections.

University of Washington

- The UW Career and Internship Center (CIC) works directly with all students and recent graduates by providing one-on-one coaching with career coaches, a variety of workshops, quarterly events, Handshake (an exclusive database of internships), career positions, campus jobs, and online resources, including a career guide. The CIC vision is to empower students to discover and pursue a path to a fulfilling career, so they can make their own unique mark on the world. Staff at the CIC do this by educating and supporting students as they explore and choose academic majors and career options, obtain and reflect upon career-related experiences, develop professional presence and essential skills for workplace success, and launch post-graduation career plans, including graduate/professional school and employment.
- The CIC, which employs sixteen staff across two locations on the Seattle campus, also works directly with employers through their online job boards, campus interview program, career fairs, and other programming. Additionally, the CIC liaises with SPH faculty and staff to partner on programming and best practices. While all UW students and recent graduates have access to the CIC, undergraduates are more likely to receive services from this generalist provider.
- The University of Washington Alumni Association recently launched Husky Landing, a networking, mentorship, career development platform. This new option will serve as a connection point for both SPH alumni and students to the greater network of the full University. SPH is actively engaging students, faculty, staff, and alumni to use the platform, connected to the existing LinkedIn networks to further expand career development opportunities.

2) Explain how individuals providing career advising are selected and oriented to their roles and responsibilities.

When faculty are the primary point for career advising, the selection process mirrors that of the faculty hiring and appointment process. As experts in their respective fields, they are well networked and prepared to assist students. Faculty hired by specific departments or programs, like Health Informatics and Health Information Management, have spent at minimum three to five years working in the field as professionals. Additionally, mentors who are selected from a pool of alumni and community partners tend to have at minimum three years of practice experience.

Those employed in professional staff positions are selected through a competitive process and come from a range of experiences in counseling, advising, higher education, social work, and student or academic affairs. The current academic internship and career services manager for the Department of Environmental and Occupational Health Sciences, for example, has eight years of experience in career counseling following a Master of Science in counseling with a specialization in working with college students. This individual is also the vice president of the Washington Career Development Association.

The degree programs in Health Administration each have a full-time dedicated staff member in a professional development specialist role. In the Health Informatics and Health Information Management program within the Department of Health Services, the current staff member has completed graduate coursework in career counseling and has held professional positions as a career counselor, taught resume writing and interviewing skills, and is a [*Dependable Strengths*](#) professional facilitator. The present associate director of academic services is trained as a career coach while completing Master of Science graduate studies. This individual also worked at the Seattle University's Career Engagement Office, serving undergraduate and graduate students as well as alumni of all ages and employment backgrounds. Duties included one-on-one career/internship counseling as well as presenting a range of workshops and events.

Across the undergraduate majors, academic advisers provide some level of career advising as part of their broader advising role. In the Public Health-Global Health major, for example, the one adviser identified as lead in career development has experience in organizational development, human resources, student affairs, and direct experience advising students on career and experiential learning topics.

Professional staff are provided onboarding with their respective departments and programs to learn about their roles and responsibilities and, in some cases, position manuals exist. They receive training related to policies and practices of the School and in UW systems. Professional development and ongoing education for these staff is supported, and is an expectation of employment. Staff frequently engage with program leadership, alumni, and community partners to understand opportunities that are available to students and alumni, and with faculty to ensure alignment of their programming with broader educational objectives.

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.

Career advising services provided to students

- In the Executive Master of Health Administration, 100 percent of the cohort (59 students) met with the practitioner-in-residence in 2017-2018.
- In Environmental and Occupational Health Sciences, 134 one-on-one career counseling appointments were held in 2016-2017.
- More than 20 organizations and 200 students participated in the 2019 Global Health Career Week.

Career advising services provided to alumni

- In Health Services, a networking mixer is an annual event. In April 2019, 10 alumni and 20 students attended.

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.

Department and Program Data

Environmental and Occupational Health Sciences is one of the departments that devotes dedicated staffing to career services. Student evaluations of their career exploration and internship preparation course averaged 4.26 out of 5.0 between 2016 and 2019 (response rates between 50-92 percent). Qualitative data from graduate students in the Graduate Professional Development Workgroup, with a response rate of 75 percent, revealed appreciation for the resources provided by the organizing staff member and reported that topics were valuable, timely, practical, and important.

The Public Health-Global Health major conducts mid-quarter and end of program evaluations through in-person visits to core classes. Students provide anecdotal feedback in those sessions about the effectiveness of career advising.

Student attendees at the SAS-sponsored workshops during the 2019-20 academic year completed post-event evaluations to help support future programs. Students rated the events positively although the response rates were relatively low (approximately 25 percent). For the Autumn Quarter 2019 workshop, the average evaluation was 4.6 out of 5.0. The feedback has been reviewed to support planning for the 2020-2021 academic year.

Other SPH departments and programs do not collect career advising data consistently. Departments and programs do, however, work continuously to adjust and improve programming and have conducted needs assessment on an ad hoc basis.

Additional materials are included in the Electronic Resource File:
Electronic Resource File\Criterion_H\H2.4.

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

Strengths

- A strength across departments and programs is the quality and quantity of relationships with community partners that result in practicums, internships, and networking opportunities that help develop career pathways for students. Community partners reach out to engage with students and alumni about job and career opportunities. Building practice experiences directly into curricula has been instrumental for positioning students to make a smooth transition to employment. In the MHA program specifically, a practitioner-in-residence (faculty) position has been key to maintaining strong relationships with regional health care organizations that employ SPH graduates. In the PHG seminar, the inclusion of practitioners who willingly offer to serve as informal mentors and help students build networks is another example.
- The School began hosting a regular gathering of all SPH career development staff to provide a venue to discuss common concerns, develop a wish-list for the School, and to collaborate on some events open to all students. This led to a short slate of timely workshops offered to students during the 2019-20 academic year.
- The School is prioritizing supporting student career development. A position has been created for an associate director of career development to join the School. The search has been on hold due to hiring and budgetary constraints related to the COVID-19 pandemic. The eventual staff person in this position will work to increase the coordination, capacity, and infrastructure for School-wide career services for all students, as well as recent alumni.
- Additional benefits are apparent to students in those departments and programs who offer career advising through dedicated professional staff. As the Public Health-Global Health major reports, partnerships between advising staff and instructors has been key to meeting career advising needs by integrating it into the classroom for all students to experience.
- Robust relationships with alumni, including those reinforced by an alumni council or mentorship program, is also a strength across departments and programs for connecting students to a strong career network.

Weaknesses

- Inconsistency across departments and programs to be able to offer career advising through dedicated professional staff is an identified weakness. Additionally, the infrastructure that supports the School's job and opportunity postings both online and at the end of student studies is not as robust and comprehensive as current technology could allow. Departments and programs struggle to meet student needs when staff positions are new or part-time. Few collect data, limiting the available evidence of success, especially in programming that is relatively young. A recognized need for the engagement with undergraduates in career services is to prioritize these services and offer them early in their junior year. Finally, alumni services are not robust or consistent at either undergraduate or graduate level.

Plans for improvement

- Departments, programs, and the School have a real opportunity to pool or coordinate programming, staffing, and facilitate best practices across professional staff, if they work together as a cohesive whole. Monthly meetings of the Undergraduate Programs Strategic Working Group is one venue where discussions have occurred since 2018 for undergraduate studies. Specific goals for both graduates and undergraduates include introducing direct and targeted assessment in order to gauge the impact on student learning and outcomes, integrating programming with curricula, refining support for capstones and internships, and better engaging alumni to support them as well as to connect them to current students. Plans will be further conceptualized during the 2020-2021 academic year. The timeline for implementation will span the life of the new SPH Strategic Plan, with full implementation occurring no later than 2025.

H3. Student Complaint Procedures

- 1) **Describe the procedures by which students may communicate any formal complaints and/or grievances to school officials, and about how these procedures are publicized.**

The [Student Concern policy](#) is posted on the student section of the SPH web site. The policy is also posted in student and School newsletters, highlighted in new student orientations, and department and programs are encouraged to include the above link in student handbooks.

In brief, students are encouraged to resolve problems informally and directly with the person with which they have an issue. In cases where they are unsure how to go about this, they are invited to work with an advisor in their department or program. Alternate reporting is available through the director of student and academic services in the Office of the Dean, and the assistant dean of equity, diversity, and inclusion, through a confidential email account for anonymous concerns, or through over a dozen concern processes in existence at the UW-level. When initial resolution does not work and a student reports an official concern that is resolved at the departmental level, the concern is reported to the Office of the Dean for inclusion in reporting. Additional student-related policies are included in Criterion G.

- 2) **Briefly summarize the steps for how a complaint or grievance filed through official university processes progresses. Include information on all levels of review/appeal.**

SPH steps for student complaint or grievance filings are as follows:

- Step 1: Directly resolve the concern with the individual when it arises (unofficial resolution).
- Step 2: Seek support in pursuing direct resolution with the student advisor and/or student services staff within the department or program (advising).
- Step 3: Report a concern that has not been resolved to the department or program contact for support with resolution (official concern resolution process) at the department or program level with resolution at the responsibility of the departmental chair or program director.
- Step 4: Report a concern that has not been resolved to student and academic services in the Office of the Dean. A hearing committee of faculty, staff, and students will provide a recommendation on the concern to the Dean who has final decision-making authority for the School.

- 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.**

There were several complaints resolved at the departmental or interdisciplinary program level that did not result in formal complaints. These included:

- Student reporting gender-based bias in the classroom in relation to teaching assistant (TA)/student relationships and TA attachment to student published work.
- Student reporting gender and religious bias experienced at a field learning site. The student reported the issue to their faculty member after some considerable time (weeks) had elapsed after returning from the field experience.
- A group of students reporting gender and race-based bias in a classroom that negatively impacted the learning environment. This issue was reported after the quarter to the Office of the Dean, and the students were willing (and did) reach back to the instructors for local resolution.

- A group of students reporting concern with an assignment attached to a community learning site and the threatening response of the instructors to student feedback on it. This concern was reported after the conclusion of the quarter in which the class was taught.
- A student reporting negative experience with advising and coaching in their academic program and also reporting inappropriate referral to campus services by their student services advisor.
- A student reporting biased grading and feedback by the TA in their class.

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

Strengths

- A particular strength is the emphasis on attempting local resolution which allows departments to take formal ownership of the learning environment for students. Another strength is the built-in feedback loop for student concerns that allows the School and department leaders to consider structural approaches to improving the learning environment for students.

Plans for improvement

- The School's official policy has been in existence since late 2018. SPH continues to raise awareness of this relatively new complaint policy. A communications plan to share the policy via student handbooks, student resource web pages, social media, and student newsletters, as well as at orientation and welcome events for new students must be regularly enacted to address the revolving nature of the student population. As needed, refreshers on the policy will continue to be offered to faculty and staff to ensure they are supporting local resolution as well. The School has also adopted principles to address faculty concerns, and guidelines are shared annually at faculty meetings to raise awareness of the supports. The process for confidential bias reports is being refined separately.

H4. Student Recruitment and Admissions

- 1) **Describe the school's recruitment activities. If these differ by degree (eg, bachelor's vs. graduate degrees), a description should be provided for each.**

Departments and programs within the SPH use a variety of strategies and tools for prospective student recruitment. According to reports from individual programs, the tool most widely used and perceived to be most effective, is the SPH web site. In addition to the web site, departments and programs manage their own, providing information and application procedures tailored to their audiences' specific needs. Additional strategies commonly used and highly rated include outreach (or referrals) through faculty, alumni, and current students; group information sessions (in-person and online); and attendance at local, regional, and national conferences and recruitment events (community college, undergraduate, graduate). Other strategies employed by some programs include Google ads, social media (LinkedIn, Facebook, Twitter, Instagram), print advertisements, newsletters, and direct mail/email.

The Office of the Dean has revised its data collection tool used at outreach events to gather more information about prospective applicants that is shared with departments and programs. This expanded information provides a basis for departments and programs to consider diversity characteristics of their prospects (race/ethnicity, gender.) The School creates and disseminates comprehensive information sheets for each department and one detailing all undergraduate options. During the 2020-21 academic year, SPH expects to add new 'one-pagers' focused on: underrepresented minority (URM) populations and equity, diversity, and inclusion work underway at the School; a PhD programs one-pager; and a MPH one-pager.

The Office of the Dean also offers the Master's Fellowships. This recruitment award is provided to admitted students who are nominated by their departments. The goal is to use this fund, as possible, to support recruitment of identified underrepresented populations (reference Criterion G). The award offers support over two academic years. The School also pursues opportunities to support student services staff in identifying specific strategies for diversity recruitment, including resource referrals such as ASPPH webinars that enable staff to learn from best practices shared by admissions and recruitment representatives from across the United States.

All of these strategies and tools ultimately lead to individual inquiries, where prospective applicant questions are answered, most often one-on-one by email and/or in-person meetings with program advisors (faculty and staff). Programs track inquiries and strive to make contact (multiple times) with those expressing interest in applying or are actively engaged in the application process.

Strategies are often tailored to the program's target audience. Some key differences in audience within the SPH include years and type of professional experience of prospective students (e.g., as most appropriate for MPH traditional vs. MPH online programs; U.S. vs. international focus in maternal and child health); interest in a specific mode of course delivery (problem-based learning); and social justice orientation. Typically, the more specific an audience, the more specific (including web site detail) and/or labor intensive (referrals, in-person) the recruitment efforts.

Available resources (staff time and finances to support recruitment activities and/or student aid) can also impact individual department or program approaches to recruitment. There has been some effort to collaborate on conference registration and travel costs within the School where the audience reach might benefit multiple programs. Otherwise, marketing and recruitment costs are typically borne by individual departments and programs.

2) Provide a statement of admissions policies and procedures. If these differ by degree (eg, bachelor's vs. graduate degrees), a description should be provided for each.

Each department and program within the School has its own application and admissions review policies and procedures, in compliance with the UW Graduate School and SPH guidelines.

Over the past several years, individual programs have increased efforts to generate more diverse applicant pools and to implement or improve upon existing holistic admissions processes. Holistic admissions is widely understood to mean that both academic (grades, test scores) and non-academic factors are given consideration in the admissions decision-making process. For many programs, this includes advance training for admissions committee reviewers to establish a shared understanding of the process, criteria, potential bias, and scoring norms. Other strategies for some programs include removal of the GRE/GMAT and changing the nature of written application statements to remove potential barriers and/or bias with regard to prior academic and/or life experience and opportunity (e.g., asking questions geared toward non-cognitive variables and changing the format of the prompts).

Application requirements common to most graduate programs include official transcripts, minimum GPA of 3.0 for the last two years of study, English language proficiency, resume/CV, academic goals statement, personal history statement, and letters of reference. Most, but not all, still require the GRE or GMAT. Graduate programs within Nutritional Sciences, as well as programs in the Department of Environmental and Occupational Health Sciences, also have specific science pre-requisites. Very few programs (the in-residence MHA, the Department of Biostatistics programs, and the Health Services: Community-Oriented Public Health Practice MPH) require formal interviews. All graduate program admissions are competitive. The number of reviewers per application varies by program, typically two to four, with admissions review committees comprised of a combination of faculty (primarily), staff, and occasionally students and/or alumni.

Application requirements common to all undergraduate programs include official transcripts, English composition, and other course content pre-requisites. The Public Health-Global Health and Health Informatics and Health Information Management majors are considered capacity-constrained majors, in that they receive more applications than the maximum they are able to accept. These majors require additional application components, including a personal statement and conducting an application review process based on a holistic approach.

The Environmental Health and Food Systems, Nutrition, and Health majors accept all students who meet minimum requirements, and have adequate time to complete program requirements given institutional satisfactory progress policies. These majors use the same online application portal and a deadline of the third Friday of each quarter.

3) Select at least one of the measures that is meaningful to the school and demonstrates its success in enrolling a qualified student body. Provide a target and data from the last three years in the format of Template H4-1. In addition to at least one from the list, the school may add measures that are significant to its own mission and context.

The below template provides a representative view of a fee-based program (Master of Health Administration) and a state-supported, capacity-constrained major (Public Health-Global Health). Targets are not included below because the fee-based program noted is based on continuing and new enrollment, which is closely monitored. The application numbers to the Public Health-Global Health degree are increasing. Since this is a capacity-constrained degree, it is not possible to declare target percentages.

Outcome Measures for Recruitment and Admissions				
Outcome Measure	Target	Year 1 2018	Year 2 2019	Year 3 2020
Public Health-Global Health: Applicant to Offer	--	60%	55%	58%
Public Health-Global Health: Offer to Enrollment	--	93%	94%	94%
Public Health-Global Health: % URM	--	35%	36%	46%
Master of Health Administration: Applicant to Offer	--	--	55%	52%
Master of Health Administration: Offer to Enrollment	--	--	51%	57%
Master of Health Administration: % URM	--	--	18%	23%

For the state-supported MPH cohort entering in Autumn Quarter 2020, SPH has begun to establish enrollment targets. In the past, offers were extended based on the extent of expected resources to support the incoming cohort at the program or department level. Fee-based programs are required to use tuition fees to cover the cost of education, and therefore establish enrollment targets that allow for a sustainable program. At the undergraduate level, growth in capacity-constrained majors, such as Public Health-Global Health, is based on the ability to add a full section, typically 125 students. This means targets are typically stable, mediated by SPH guidance, as well as recommendations from the UW Office of the Provost.

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

Strengths and Plans for improvement

- At the School-level, the Office of the Dean has taken several steps in recent years to demonstrate its commitment to equity, diversity, and inclusion in student recruitment and in the student admissions process. These steps are facilitated by the manager of outreach and scholarships, and are described in Criterion G.
- Additional efforts include highlighting those issues and priorities for recruitment on the SPH web site, dedicating School funds for representation at several national and regional conferences (including the Society for Advancement of Chicanos/Hispanics and Native Americans in Science, and the Annual Biomedical Research Conference for Minority Students), facilitating the development and production of consistently branded one-page flyers representing multiple departments and programs, and sponsoring an annual SPH Open House to showcase those programs. These efforts are augmented by departments and programs, to varying degrees, based on available resources (faculty and staff FTE, expertise, and funding).
- While good work and progress has been made at all organizational levels, more can always be done. At the School level, a more strategic approach, incorporating sharing of best practices for both recruitment and holistic admissions, post-activity/event assessment (aligned with clear benchmarks), and additional allocation of resources (faculty/staff FTE and funding for national conferences) has been recommended by multiple departments/programs. These efforts would also be better served by improved coordination of communications and increased staffing stability (less turnover) within the student and academic services team in the Office of the Dean.

- Several programs actively track their inquirer (prospective applicant) contacts with an eye toward comparing effectiveness of different recruitment strategies or tools and comparing the number of inquirers and applicants over time. Systematically asking inquirers and applicants how they learned about the program helps tailor future recruitment activity. Review of the recruitment strategies used in some of the more high-touch programs have shown that in-person contact and multiple points of contact are both effective in yielding higher percentages of inquirer-to-applicant and offer-to-enrollment ratios. This practice of active tracking is a strength for those programs and could provide a model for use by others in SPH.
- Staff across departments and programs make an effort to support each other at recruitment events of mutual benefit, such as the SPH undergraduate programs who collaborate on prospective student outreach.
- Additional areas for improvement recommended by departments and programs include increasing engagement of current students and alumni; creating more opportunities for classroom visits and information meetings (online and in-person); developing better undergraduate and workplace pipelines; continuing working with community college partners on expanding advising and informational workshops; and connecting more with Registered Student Organizations.

Specific planning

- Admissions: provide annual School-led sharing of best practices for holistic admissions.
- SOPHAS: at the time of this writing, SPH has decided to join SOPHAS (Schools of Public Health Application System through the ASPPH) for all of its MPH degrees. Planning has begun, with the launch for accepting applications for the 2022-23 academic year.
- Student Recruitment: develop a clearer, better communicated School-wide plan and timeline for student recruitment that includes the following:
 - Clear delineation of School, department, and program priorities (with benchmarks) and resource allocation.
 - Improved strategies for optimized web presence, with coordination of content at the School-level.
 - Increased coordination and utilization of social media.
 - Increased funding for student attendance at conferences.
 - Additional cross-training of student and academic services staff re: SPH programs and audiences for improved representation at conferences, etc.
 - Established routine for sharing of best practices and training on strategies, tools, etc.
 - Established process for routine assessment and improvement.

H5. Publication of Educational Offerings

- 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.**

The School of Public Health follows the UW Academic Calendar timeline.
<https://www.washington.edu/students/reg/calendar.html>.

All SPH departments and programs adhere to the same policy for academic integrity standards as well: [SPH Academic Integrity Policy](#).

The below table provides links for all SPH degree programs for admissions policies, grading policies, and degree completion requirements.

Department, Program	Admissions Policies	Grading Policies	Degree Completion requirements
Biostatistics	<ul style="list-style-type: none"> ♦ Biostatistics Admissions 	<ul style="list-style-type: none"> ♦ UW Grading Policy 	<ul style="list-style-type: none"> ♦ MS Capstone ♦ MS Thesis ♦ PhD
Environmental and Occupational Health Sciences	<ul style="list-style-type: none"> ♦ BS Admissions ♦ MPH/MS/PhD Admissions 	<ul style="list-style-type: none"> ♦ UW Grading Policy 	BS <ul style="list-style-type: none"> ♦ BS, EH MPH <ul style="list-style-type: none"> ♦ EOH ♦ OccMed ♦ One Health MS <ul style="list-style-type: none"> ♦ Applied Occ Hygiene ♦ Applied Toxicology ♦ EH ♦ ExpSciences ♦ OccHygiene ♦ Toxicology PhD <ul style="list-style-type: none"> ♦ Env Occ Hygiene ♦ Toxicology
Epidemiology	<ul style="list-style-type: none"> ♦ EPI Admissions 	<ul style="list-style-type: none"> ♦ UW Grading Policy 	<ul style="list-style-type: none"> ♦ MPH ♦ MS ♦ PhD
Global Health	<ul style="list-style-type: none"> ♦ MPH Admissions ♦ PhD, Global Health Metrics & Implementation Science Admissions ♦ PhD, Pathobiology Admissions 	<ul style="list-style-type: none"> ♦ UW Grading Policy 	<ul style="list-style-type: none"> ♦ MPH ♦ PhD in Global Health ♦ PhD in Pathobiology
Health Administration	<ul style="list-style-type: none"> ♦ MHA Admissions ♦ EMHA Admissions 	<ul style="list-style-type: none"> ♦ UW Grading Policy 	<ul style="list-style-type: none"> ♦ MHA ♦ EMHA
Health Services	<ul style="list-style-type: none"> ♦ MPH Admissions ♦ COPHP Admissions ♦ OMPH Admissions ♦ MS Admissions ♦ PhD Admissions ♦ HIHIM Admissions ♦ MHIHIM Admissions 	<ul style="list-style-type: none"> ♦ COPHP and OMPH, Graduate School Memo 19 ♦ UW Grading Policy, all other Health Services degrees 	<ul style="list-style-type: none"> ♦ MPH ♦ COPHP ♦ OMPH ♦ MS ♦ PhD ♦ HIHIM ♦ MHIHIM

Department, Program	Admissions Policies	Grading Policies	Degree Completion requirements
Nutritional Sciences	<ul style="list-style-type: none"> ♦ Undergraduate ♦ Graduate 	♦ UW Grading Policy	<ul style="list-style-type: none"> ♦ Undergraduate ♦ Graduate
Public Health Genetics	♦ PHG Admissions	♦ UW Grading Policy	<ul style="list-style-type: none"> ♦ MPH ♦ MS ♦ PhD
Public Health-Global Health	♦ PH-GH Admissions	♦ UW Grading Policy	♦ BA/BS



The Soul Catcher, a Northwest Indian symbol for physical and spiritual well-being, designed in 1981 by the late Marvin Oliver.