Contents

Introduction	
A1. Organization and Administrative Processes	
A2. Multi-Partner Schools (applicable ONLY if functioning as a "collaborative unit" as defined in C procedures)	EPH 27
A3. Student Engagement (SPH and PHP)	
A4. Autonomy for Schools of Public Health (SPH only) A school of public health operates at the h level of organizational status and independence available within the university context	ighest
A5. Degree Offerings in Schools of Public Health	
B1. Guiding Statements	
B2. Graduation Rates	
B3. Post-Graduation Outcomes	
B4. Alumni Perceptions of Curricular Effectiveness	
B5. Defining Evaluation Practices	
B6. Use of Evaluation Data	60
C1. Fiscal Resources	
C2. Faculty Resources	
C3. Staff and Other Personnel Resources	71
C4. Physical Resources	74
C5. Information and Technology Resources	
D1. MPH & DrPH Foundational Public Health Knowledge	
D2. MPH Foundational Competencies	
D3. DrPH Foundational Competencies (SPH and PHP, if applicable)	110
D4. MPH & DrPH Concentration Competencies	111
D5. MPH Applied Practice Experiences	136
D6. DrPH Applied Practice Experience (SPH and PHP, if applicable)	151
D7. MPH Integrative Learning Experience	152
D8. DrPH Integrative Learning Experience (SPH and PHP, if applicable)	162
D9. Public Health Bachelor's Degree General Curriculum	163
D10. Public Health Bachelor's Degree Foundational Domains	164
D11. Public Health Bachelor's Degree Foundational Competencies	165
D12. Public Health Bachelor's Degree Cumulative and Experiential Activities	166
D13. Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	167
D14. MPH Program Length	168
D15. DrPH Program Length	170
D16. Bachelor's Degree Program Length	171
D17. Academic Public Health Master's Degrees	172
D18. Academic Public Health Doctoral Degrees	194

D19. All Remaining Degrees	219
D20. Distance Education	227
E1. Faculty Alignment with Degrees Offered	231
E2. Integration of Faculty with Practice Experience	250
E3. Faculty Instructional Effectiveness	252
E4. Faculty Scholarship	257
E5. Faculty Extramural Service (SPH and PHP)	268
F1. Community Involvement in School Evaluation and Assessment	274
F2. Student Involvement in Community and Professional Service	281
F3. Assessment of the Community's Professional Development Needs	287
F4. Delivery of Professional Development Opportunities for the Workforce	292
G1. Diversity and Cultural Competence	296
H1. Academic Advising	312
H2. Career Advising	319
H3. Student Complaint Procedures	330
H4. Student Recruitment and Admissions	334
H5. Publication of Educational Offerings	342

Introduction

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

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

The University of Minnesota was established in 1851, while the region was still a U.S. territory. Although Minnesota entered statehood in 1858, the University did not become fully functional until the after the U.S. Civil War. When, in 1869, the University inaugurated William Watts Folwell as its first president, it began building as a "land-grant" institution (Morrill Act, 1862) on land taken by force and (and broken treaties) from the Dakota people. Today, the University acknowledges its troubling origins and recognizes its debt to the Dakota people. Working with the state's eleven tribal communities (four Dakota, seven Anishinaabe), the University actively seeks reconciliation with its history, including partnerships with tribal communities to improve relations with and opportunities for indigenous people statewide.

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 University of Minnesota system consists of five campuses: Crookston, Duluth, Morris, Rochester, and the flagship Twin Cities campus, home to the School of Public Health and a total of 18 schools, colleges, and other major academic units:

- College of Liberal Arts
- College of Biological Sciences
- Carlson School of Management
- College of Continuing and Professional Studies
- Medical School
- School of Dentistry
- School of Nursing
- College of Design
- College of Pharmacy
- College of Education and Human
 Development

- Hubert H. Humphrey School of Public
 Affairs
- Extension
- School of Public Health
- College of Food, Agricultural and Natural Resource Sciences
- College of Science and Engineering
- Graduate School
- College of Veterinary Medicine
- Law School

Between the five campuses of the University of Minnesota System, students can explore nearly 300 majors and programs in the following degree levels:

Degree Level	Number of Degrees
Bachelor's: BS, BASc, BA, BFA, BMus, BAEM, BSAstrop, BBME, BBE, BcheE, BCE, BCompE, BSCompSc, BEE, BEnvE, BGeoE, BISye, BMatSE, BSMath, BME, BSB, BSPH, BDA, BFA, BSN	25
Master's & Professional: MS, MPS, MBS, MPS, MArch, MA, MFA, MHSPH, MLA, MEd, MSW, MPS, MSDH, MDT, MHI, MHR, MDP, MPA, MPP, MURP, AuD, MGIS, DMA, MM, MAcc, MABA, MBA, MBT, MHRIR, MSSurg, MN, MPH, MHA, MChE, MSChE, MCE, MCS, MSECE, MFM, MGeoE, MSISYE, MSMOT, MMatE, MSME, MSST	45
Doctoral: PhD, EdD, AuD, DMA, SJD, DBA, PhDOtol, DPT, DNP	9

Bachelor: <u>https://catalogs.umn.edu/sites/catalogs.umn.edu/files/2020-</u>09/UMNTC%20Programs%20Undergrad%202020-22.pdf

Master & Doctoral: <u>https://catalogs.umn.edu/sites/catalogs.umn.edu/files/2020-09/UMNTC%20Graduate%20Programs%202020-22.pdf</u>

c. Number of university faculty, staff and students

- Faculty: 4,702 (2021 https://oir.umn.edu/hr/employee-count)
- Staff: 21,516 (2021 https://oir.umn.edu/hr/employee-count)
- Students, Fall 2021: 11,990 Graduate; 3,957 professional students; 30,734 undergrads (https://oir.umn.edu/student/enrollment)

These numbers represent all five UMN campuses, not just the Twin Cities campus where the SPH is housed.

d. Brief statement of distinguishing university facts and characteristics

Mission: The University of Minnesota (University), founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to benefit the people of the state, the nation, and the world.

The University's mission, carried out on multiple campuses and throughout the state, is threefold:

- **Research and Discovery**: To generate and preserve knowledge, understanding, and creativity by conducting high-quality research, scholarship, and artistic activity that benefit students, scholars, and communities across the state, the nation, and the world.
- **Teaching and Learning**: To share that knowledge, understanding, and creativity by providing a broad range of educational programs in a strong and diverse community of learners and teachers, and prepare graduate, professional, and undergraduate students, as well as non-degree seeking students interested in continuing education and lifelong learning, for active roles in a multiracial and multicultural world.
- **Outreach and Public Service**: To extend, apply, and exchange knowledge between the University and society by applying scholarly expertise to community problems, by helping organizations and individuals respond to their changing environments, and by making the knowledge and resources created and preserved at the University accessible to the citizens of the state, the nation, and the world.

The <u>Twin Cities campus</u> is home to 18 colleges and schools, including the School of Public Health. The University maintains a comprehensive academic portfolio in three coordinate campuses (Crookston, Duluth, and Morris), the Rochester campus (part of the Twin Cities campus), the statewide extension service, and hundreds of research and outreach centers. As a comprehensive public research university, we have a strong tradition of education and public service, with faculty of national and international reputation. Through world-class research, scholarship, and public engagement, the University addresses challenges at the local, national, and global level and provides broad access to its programs and resources. The University ranks eighth among U.S. research institutions for the number of students from other nations who study here (about 7,000, or 12 percent of total enrollment, on the Twin Cities campus alone in a typical year). Additionally, more than a third of undergraduates earn credits in the University's extensive study abroad program.

The University of Minnesota is also home to six <u>schools and colleges of the health sciences and</u> <u>professions</u>. In addition to the School of Public Health, the health sciences comprise the Schools of Dentistry, Medicine (Twin Cities and Duluth), Nursing, Pharmacy (Twin Cities and Duluth), and Veterinary Medicine, as well as allied health programs. Only two other U.S. universities maintain such a comprehensive spectrum of health sciences disciplines and professions (Ohio State University and the University of Florida, Gainesville).

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 University of Minnesota is accredited by the <u>Higher Learning Commission</u>. See the Electronic Resource File, Introduction folder, Introduction 1 subfolder for a PDF file of the University's specialized professional accreditations from 2021.

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

University of Minnesota's Early Role in Public Health

In his inaugural address of December 22, 1869, the University's first president recognized the important role of public health in the academy, saying, "The time is not distant when a department of public health will be established in all universities..." In 1873, Dr. Charles N. Hewitt joined the faculty as the first "non-resident professor of public health." Hewitt served as a founding member of the American Public Health Association, along with colleague Dr. Stephen Smith. In 1906, the University established an Institute of Public Health and Pathology in the Medical School. By 1922, the Institute became the Department of Public Health. In 1935, while still part of the Medical School, the MPH degree was offered as a specialty to those studying medicine and nursing. Notably, Dr. Lester Breslow, one of the most respected public health figures of the last century—credited with pioneering chronic disease prevention and health behavior intervention—graduated from our MPH program in the 1930s.

The School of Public Health Founded

What is now the School of Public Health was founded in 1944, eighth in the nation, and fourth among state universities after UNC-Chapel Hill (1940), Michigan (1941), and Berkeley (1943). Dr. Gaylord Anderson served as founding dean until his retirement in 1970, receiving APHA's coveted Sedgwick Medal in 1963 for career accomplishments. In its 75+-year history, SPH underwent many transitions and expansions in its organizational, research, and program structures.

Today, the <u>School of Public Health</u> has a complement of 112 full-time tenure-track, tenured, and contract faculty engaged in research, teaching, and community service. Each year, more than <u>1,300 active</u> <u>students study</u> in 17 programs (13 master's: MPH, MS, MHA; 4 PhD), with 23 dual degree options linking the school to business, dentistry, law, medicine, nursing, pharmacy, public policy, social work, urban and regional planning, veterinary medicine, and a "4+1" BS+MPH program with the College of Biological Sciences and the University of Minnesota-Rochester. SPH also offers a dozen <u>graduate minors and</u> <u>seven Regents certificates</u> for non-degree seeking students. We are one of the few schools of public health that offers a minor in American Indian Public Health. <u>Blended learning programs using "executive"</u> <u>models</u> permit us to reach beyond our geospatial confines. In a typical year, SPH graduates about 400 students and celebrates more than 11,800 living alumni. In terms of NIH-funded research, SPH currently ranks tenth among the 67 accredited schools.

The school's <u>research portfolio covers the spectrum of public health research</u> from the laboratory bench to large-scale observational and cohort studies to double-blind placebo-controlled clinical trials on a global scale, to community and population interventions and public policy impact change studies, and everything in between. Propelling faculty research are <u>24 centers</u> and three faculty work groups that span the school, uniting faculty in specific areas of research and education that cross-cut the divisions. Most centers are located in the school, but a few are shared entities with more than one college in the health

sciences. Currently active work groups include <u>health equity</u>, <u>global health</u>, and <u>aging</u>. As detailed further below, SPH has been a <u>leader in public health and population research for decades</u>, not just locally, but nationally and globally.

As part of our applied practice obligations, SPH continues to build its <u>workforce development program</u> aimed at alumni and public health professionals.

The school ranks in the top 10 (USN&WR) among more than 200 accredited schools and programs. SPH comprises four divisions, and here we present a brief history of each.

Health Policy & Management

In 1946, SPH welcomed <u>Dr. James A. Hamilton</u> to its faculty. Hamilton established one of the country's first professional degree programs in hospital administration. That program evolved to become our current Master of Health Administration (MHA), including fully accredited regular and executive tracks. <u>Among MHA programs, ours ranks number two nationally</u>. Today, the MHA program is part of the <u>Division of Health Policy and Management (HPM)</u>, which includes a focus on health services research, health care delivery and public health systems and policy, health economics, insurance, aging, rural health, and antiracism research and education, the latter of which has expanded and intensified significantly in the wake of the murder of George Floyd in summer 2020. Overall, the division has evolved over time to become today's <u>extensive array of education programs</u>: three master's degree programs, three executive and online master's, a PhD program in health services research, policy, and administration including graduate minors, joint degrees with the Carlson School of Management and the Law School, and two non-degree Regents' Certificates. The division today has a complement of 33 faculty and more than a dozen lecturers and instructors, and it <u>ranks tenth in health policy and management degrees online</u>.

Environmental Health Sciences

Today's <u>Division of Environmental Health Sciences</u> originated in the 19th century following the formation of the State Board of Health under Dr. Hewitt in 1873. Almost immediately, the Board began addressing such issues as sanitation and waste handling, ventilation, personal hygiene, and home heating. In the 1930s, Professor George Pierce established the Division of Sanitation and Public Health Engineering in the University's own Health Department. In 1949, Professor Herbert Bosch partnered with Dr. Ruth Boynton to create a program dedicated to controlling environmental hazards. They called it public health engineering, but later renamed it environmental health. The division has continually expanded its research and academic programs which now include graduate, doctoral, and joint degrees in diverse concentrations with 22 full-time faculty. Focal areas address important and emerging issues in environmental health, including infectious diseases, toxicology, exposure sciences, environmental chemistry, industrial hygiene, medicine and nursing, epidemiology, injury prevention, and global health. Research is vital as the division is home to multiple research and education centers as well as collaborations with partner institutions.

Biostatistics

The <u>Division of Biostatistics</u> originated in 1924 with Professor J. Arthur Harris, head of the Department of Botany. Harris began teaching "biometry" to small groups of biosciences students interested in statistical methods as research and scientific tools. In 1936, biometry merged with the Medical School's Department of Public Health and Preventive Medicine. With that merger, statistics applications in public health and the health sciences became standard. In 1953, mathematician Dr. Jacob Bearman became head of the Division of Biometry within the School of Public Health. The same year, the National Institutes of Health offered grants to support a national expansion of biostatistics research and education. Bearman and his colleagues used their grant award to train more biostatistics graduates by the 1960s than any other school of public health at the time. In the early 1980s, the Division of Biometry changed its name to the Division of Biostatistics, which now <u>offers professional, graduate, and doctoral degrees</u> in biostatistics as well a graduate minor, Regents Certificate, and summer institute. A professional degree in public health data science is currently pending approval by the Board of Regents. The division also collaborates across the health sciences and professions through its <u>Biostatistics Design and Analysis Center (BDAC)</u>, within the NIH-funded Clinical Translational Science Institute (CTSI). Finally, the Division of Biostatistics is among the world's leading academic units specializing in clinical trials on a national and global scale. The

<u>Coordinating Center for Biometric Research (CCBR)</u>, established in 1972 by Professor James Neaton and colleagues, has a nearly 50-year record of collaboration on some of the <u>world's largest health</u> <u>research projects</u> including the current COVID-19 pandemic. Today, 27 faculty and three instructors support the mission core of the division, assisted by dozens of qualified staff. The <u>division ranks seventh</u> <u>in the nation</u> among biostatistics programs.

Epidemiology & Community Health

The Division of Epidemiology & Community Health (EpiCH) originated from multiple University academic units in the 1920s and formally developed into its current configuration in 1983. In 1922, the school's predecessor Medical School department offered an elective course in the nascent public health science of epidemiology. That course became required when the MPH degree was first offered in 1935. Around the same time (1937), the Medical School recruited physiologist Ancel Keys from the Mayo Clinic to its own department of physiology. Keys left the department in 1938 to set up his laboratory of physiological hygiene, which he directed until his retirement in 1972. Following the Regents' action in 1944 to formally establish the School of Public Health, Keys subsequently affiliated his lab with the SPH. Keys' work—in collaboration with Dr. Henry Taylor and their many colleagues—on chronic disease, nutrition, physical activity, and the physiology of starvation is <u>renowned science</u>. The research of these esteemed scholars provided the basis for expanding into the realm of chronic disease prevention and health promotion through community and population intervention research under Keys' successor, <u>Dr. Henry Blackburn</u>.

In 1954, <u>Leonard Schuman, MD, MPH</u>, joined the School of Public Health as the founding head of the Division of Epidemiology. With colleagues, Schuman led the effort to establish the nation's first PhD program in epidemiology. Schuman was well known in public health as both an infectious disease and chronic disease epidemiologist. He served on the original polio vaccine trial review panels that approved the Salk and Sabin versions. He also served, in 1964, on Surgeon General Luther Terry's editorial board that approved the first major Surgeon General's report on smoking, linking the habit to lung cancer and heart disease. He was awarded APHA's Sedgwick Medal in 1993 for career accomplishments in public health.

When Schuman retired in 1983, the school reorganized by combining Keys' lab and Schuman's Division of Epidemiology. Over the next decade, the new Division of Epidemiology, under Blackburn's direction, expanded through mergers of "orphan" programs including community health education, mental health, public health nutrition and maternal and child health. Under Blackburn's leadership and that of his successor, Dr. Russell Luepker, the division became home to a growing number of faculty specializing in social and behavioral sciences applied to public health challenges. Their growing presence was a national public health necessity as the field moved into community and population interventions aimed at disease prevention and the promotion of health and wellbeing. Under Luepker's leadership, the division renamed itself to reflect its growing spectrum of science, research, and education: Division of Epidemiology and Community Health.

Today, this division offers five master's degrees including community health promotion, public health nutrition, maternal and child health, epidemiology (all MPHs), and clinical research (MS). In addition, the PhD in epidemiology includes both biological and social/behavioral tracks. <u>More than 40 faculty and a dozen instructors</u> support the core of the research, education, and engagement missions, with dozens of staff assisting.

2) Organizational charts that clearly depict the following related to the school: The school's internal organization, including the reporting lines to the dean



See the Electronic Resource File, Introduction folder, Introduction 2 subfolder, for a PDF file of the SPH's organizational chart from February 2022.

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

The SPH dean is a member of the Twin Cities Deans Council. That group meets biweekly and is chaired by one of the University's 20 deans on a biennial rotational basis. The Council is advisory to the <u>president</u> and <u>provost</u> who usually attend each meeting to provide reports, receive feedback, and answer questions. Senior University administrators, especially on the Twin Cities Campus, often attend as well. The dean is also a member of the health sciences deans group that meets monthly to discuss issues specific to the health sciences and professions.

Associate deans each serve on University committees appropriate to their portfolios. The associate dean for faculty affairs serves on the provost's committee, which includes associate deans from across the schools and colleges. The associate dean for research sits on the Council of Research Associate Deans under the University vice president for research. The associate dean for education and student affairs is a member of the University of Minnesota Health Sciences Associate Deans and Program, under the **associate vice president**, Office of the Associate Vice President for Academic Health Sciences, the professional education council under the provost, and the graduate associate deans committee, under the vice provost and dean of graduate education.



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

Please also find a copy of this organizational chart in the Electronic Resource file, Introduction 2 folder.

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

Not Applicable

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

Degrees and Concentrations			Categorized as public health*	Campus based	Executive	Distance based	
Master's Degree	es	Academic	Professional				
Biostatistics		MS		X	MS		
Community Heal	th Promotion		MPH	X	MPH		
Environmental H	ealth	MS	MPH	X	MS, MPH		
Epidemiology		MS`	MPH	X	MS, MPH		
Maternal and Ch	ild Health		MPH	X	MPH		MPH
Public Health Ad	ministration and Policy		MPH	X	MPH	MPH	MPH
Public Health Da	ta Science		MPH	X	MPH		
Public Health Nu	trition		MPH	X	MPH		
Public Health Pra	actice		MPH	X	MPH	MPH	MPH
Healthcare Admi	nistration		MHA		MHA	MHA	MHA
Clinical Research		MS			MS		MS
Health Services Research, Policy & Administration		MS			MS		
Doctoral Degree	es	Academic	Professional				
Biostatistics		PhD			PhD		
Environmental H	ealth	PhD			PhD		
Epidemiology		PhD			PhD		
Health Services Research, Policy & Administration		PhD			PhD		
Joint Degrees - Dual/Joint Specific Concentration		Academic	Professional				
Business	Healthcare Administration (MHA/MBA)	MBA	MHA		MHA/MBA		
Dentistry	Public Health Practice (MPH/DDS)		MPH	Х	MPH/DDS		
Human Rights	Public Health Practice (MPH/MHR)		MPH	X	MPH/MHR		
Law	Public Health Practice (MPH/JD)		MPH	Х	JD/MPH		

Template Intro-1: Instructional Matrix of UMN Degrees and Concentrations

Degrees and Concentrations				Categorized as public health*	Campus based	Executive	Distance based
Law	Public Health Administration and Policy (MPH/JD)		MPH	x	MPH/JD		
Law	Health Care Administration (MHA/JD)		MHA		MHA/JD		
Law	Community Health Promotion (MPH/JD)		MPH	Х	MPH/JD		
Law Environmental Health (MPH/JD, MS/JD, PhD/JD)		MS, PhD	MPH	x	MPH/JD, MS/JD, PhD/JD		
Law Epidemiology (MPH/JD)		MPH	Х	MPH/JD			
Law	Health Services Research, Policy & Administration (MS/JD, PhD/JD)	MS, PhD			MS/JD, PhD/JD		
Law	Maternal and Child Health (MPH/JD)	PhD	MPH	Х	MPH/JD		
Medicine	Public Health Practice (MPH/MD)		MPH	X	MPH/MD		
Medicine	Epidemiology (PhD/MD)	PhD	MD	x	PhD/MD		
Medicine	Health Services Research, Policy & Administration (PhD/MD)	PhD			PhD/MD		
Nursing Public Health Practice (MPH/DNP)			MPH	Х	DNP/MPH		
Pharmacy	Public Health Practice (MPH/PharmD)		MPH	Х	PharmD/MPH		
Public Policy	Public Health Practice (MPH/MPP)		MPH	X	MPP/MPH		
Urban and Regional Planning	Public Health Practice (MPH/MURP)		MPH	x	MURP/MPH		
Social Work	Community Health Promotion (MPH/MSW)		MPH	X	MPH/MSW		
Social Work	Maternal and Child Health (MPH/MSW)		MPH	X	MPH/MSW		
Veterinary Medicine	Veterinary Public Health (MPH/DVM)		MPH	Х	DVM/MPH		

` = Students are not admitted directly into the Master of Science program in Epidemiology. It serves as a terminal degree opportunity, by special arrangement, for pre-doctoral students who do not complete the PhD in Epidemiology.

See the Electronic Resource File, Introduction folder, Introduction 3 subfolder, for the Template Intro-1 spreadsheet from January 2022.

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.

Degree			Current Enrollment - Spring 2022
-	MPH - TOTAL	•	844
		Community Health Promotion	87
		Environmental Health	59
		Epidemiology	119
		Maternal & Child Health	95
		Public Health Administration & Policy	181
		Public Health Data Science	0
		Public Health Nutrition	33
Master's		Public Health Practice	140
	Academic public health	225	
		Biostatistics	48
		Clinical Research	17
		Environmental Health	19
		Epidemiology`	0
		Health Services Research, Policy & Administration	18
	All remaining master's degrees (SPH)	Healthcare Administration	123
	DrPH	NA	NA
	Academic public health	doctoral - TOTAL	181
		Biostatistics	47
Doctoral		Environmental Health	38
Doctoral		Epidemiology	60
		Health Services Research, Policy & Administration	36
	All remaining doctoral degrees (SPH)	NA	NA
` = Students a terminal degr	are not admitted directly ee opportunity, by specia	into the Master of Science program in Epider al arrangement, for pre-doctoral students who	niology. It serves as a do not complete the

Template Intro-2: Enrollment Data for All Degrees (MPH/MS/MHA and PhD) as of 2/1/2022

See the Electronic Resource File, Introduction folder, Introduction 4 subfolder, for the Template Intro-2 spreadsheet from February 1, 2022.

PhD in Epidemiology.

Please note the MPH in Public Health Data Science is a new program with new students enrolling in courses for the first time in fall 2022.

A1. Organization and Administrative Processes

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

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

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

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

The school's primary standing committees, as embodied in the constitution and bylaws, play a vital role in advancing SPH's tripartite mission. These primary standing committees include the following:

- Academic Professional & Administrative (P&A) Senate
- Appointment, Promotion & Tenure Committee
- Diversity, Equity & Inclusion (DEI) Action Alignment Team (established 2021 as a standing committee)
- Educational Policy Committee
- Executive Team (formerly known as The Policy Council)
- Faculty Consultative Committee
- Recognition, Awards & Honors Committee
- Research Committee
- Staff Association
- Student Senate

Academic Professional and Administrative (P&A) Senate

- Purpose The P&A Senate addresses issues of concern to the academic professional and administrative staff in the SPH. It advises and makes recommendations to division heads, the policy council, or the dean on matters of concern to academic professional and administrative staff. It recommends academic professional and administrative staff members to serve on standing or ad hoc committees of the school when such membership is deemed appropriate by the dean. The P&A Senate reviews and comments on proposed revisions to the school's constitution or bylaws before they are submitted to the voting faculty for ratification. Beginning in 2021, the P&A Senate and staff association hold joint meetings. This committee serves as an advisory committee in the SPH.
- Composition The membership of the P&A Senate includes one academic professional or administrative staff person from each division, and a total of one for all the central administrative offices in the school. Members serve two-year terms.
- Current Membership
 - Ananta Bangdiwala, BIO (year 1 of 2)
 - Tia Hernandez Petrulo, EnHS (year 1 of 2)
 - Anne Marie Hotop EpiCH (year 2 of 2)
 - Kris Woll, Dean's Office/Central Unit (year 2 of 2)
 - Christina Worrall, HPM (year 1 of 1)

Appointment, Promotion and Tenure Committee (APT)

- Purpose The APT committee is responsible for the implementation of the provisions of the academic faculty appointment, promotion and tenure policy for the SPH. The committee reviews and recommends the appointment of regular faculty, continuation of probationary (tenure-track) faculty, the recommendation of promotion and granting of tenure, and other duties of review and recommendation as required. This committee serves as the faculty governance committee in SPH.
- Composition Membership includes two faculty members from each division, of which at least one is a full professor, elected by eligible members of that division. Division heads are not eligible for membership. Members are elected for two-year terms by secret ballot of voting faculty and may be elected for a maximum of two consecutive terms. The new term begins fall semester.
- Current Membership
 - Lynn Blewett, HPM (year 2 of 2)
 - Mary Butler, HPM, (year 1 of 3)
 - Haitao Chu, BIO (year 2 of 2)
 - Linda Bane Frizzell, EnHS, (year 1 of 2)
 - Sarah Gollust, HPM (year 1 of 3)
 - Jim Hodges, BIO (year 1 of 3)
 - Byeonghwa Jeon, EnHS (year 1 of 3)
 - Weihong Tang, EpiCH (year 2 of 2)
 - Toben Nelson, EpiCH (year 1 of 3)
 - Lisa Peterson, EnHS (year 2 of 2)
 - Kyle Rudser, BIO (year 1 or 2)
 - David Vock, BIO (year 1 of 3)
 - Lynn Eberly, Associate Dean for Academic Affairs (ex officio)
 - o Stefannie Thompson, Faculty Affairs Administrator

DEI Action Alignment Team

- Purpose The SPH Diversity, Equity, and Inclusion (DEI) Action Alignment Team is the central organizing group for diversity, equity, and inclusion in SPH. This group leads change in the school as we prioritize antiracism in our culture, education, research, and community engagement. The team seeks to ensure that all groups focused on DEI initiatives across the school are being properly supported and that our resources are leveraged appropriately. This team helps to prioritize, implement, evaluate, and report on the progress of the DEI strategic plan.
- Composition Team members serve as point of contact for their respective unit (e.g. division/program/area).
- Current Membership
 - o Jesse Berman & Dana Carroll, Faculty representative, Environmental Health Sciences
 - Sarah Bjorkman, Director of Communications
 - Ellyn Buchanan, Director of E-Learning
 - Janette Dill & Stuart Grande, Co-chairs, Health Policy & Management (HPM) antiracism project committee
 - Emily Dunsworth, Assistant Dean of Recruitment & Enrollment
 - Lynn Eberly, Associate Dean of Faculty Affairs
 - Lauren Eldridge, Director of DEI
 - Sara Hurley, Assistant Dean of Learning Innovations
 - Tracey Kane, Assistant Director of Human Resources
 - o Jessica Kowal, Chief Development Officer
 - Xianghua Luo, Faculty representative, Biostatistics
 - Vic Massaglia, Director of Career and Professional Development
 - Heidi Mastrud, Director of Alumni Relations

- Victoria Nguyen, Graduate Assistant, EpiCH Diversity Action Team
- Jennifer Porter, Assistant Dean of Enrolled Students
- Susan Rafferty, Chief of Staff
- Gayle Smaller, Jr., Associate Director of DEI
- Tom Stanoch, Web Manager
- Traci Toomey, Faculty representative, Epidemiology & Community Health (EpiCH)
- o Traci Toomey & Jamie Slaughter-Acey, Co-chairs, EpiCH Diversity Action Team
- o Louis Monette, Graduate Assistant, HPM antiracism project committee

Educational Policy Committee (EPC)

- Purpose The EPC is responsible for studying and making recommendations to the policy council and the dean regarding modification of or additions to the SPH educational policies and education issues of school-wide importance, including but not limited to periodic review of core area education requirements for SPH, review and monitoring of existing courses, approval of proposed courses, review of proposed degree programs, and providing a forum for negotiating course requirement issues.
- Composition The membership includes one faculty member for each cluster of SPH and graduate school programs plus one student representative. Other significant educational activities are represented as the EPC decides. Vacancies are filled through appointment by the dean upon recommendation of the respective program director, directors of graduate studies, and a student senate representative.
- Current Membership
 - Voting members:
 - Jean Abraham (MHA Healthcare Administration)
 - Silvia Balbo (MS & PhD Environmental Health)
 - Jeff Bender (MPH Public Health Practice)
 - Zobeida Bonilla (MPH Maternal and Child Health)
 - Kamakshi Lakshiminarayan (MS Clinical Research)
 - Jennifer Linde (MPH Community Health Promotion)
 - Richard Maclehose (PhD Epidemiology)
 - Donna McAlpine (MS & PhD Health Services Research, Policy and Administration)
 - Ruby Nguyen (Undergraduate Programs)
 - Matt Simcik (MPH Environmental Health)
 - Lyn Steffen (MPH Public Health Nutrition)
 - Rachel Widome (MPH Epidemiology)
 - Julian Wolfson (EPC Chair, PhD Biostatistics)
 - Becky Wurtz (MPH Public Health Administration and Policy)
 - Ex officio members:
 - Ellyn Buchanan, Director of E-Learning
 - Emily Dunsworth, Assistant Dean for Recruitment and Enrollment
 - Lauren Eldridge, Director of Diversity, Equity & Inclusion
 - Anne Marie Hotop, CEPH Accreditation Project Manager
 - Sara Hurley, Assistant Dean for Learning Innovations
 - Rhonda Jones-Webb, Chair Division Training Committee
 - Katie Keyser, Program Coordinator Representative
 - Emily McGuire, Student Senate Representative
 - Katie McLain, Executive Office & Administrative Assistant
 - Jennifer Porter, Assistant Dean for Student Enrolled Experience
 - Mercedes Taneja, Applied Practice Experience Coordinator
 - Elizabeth Wattenberg, Associate Dean of Education & Student Engagement

Stefanie Wiesneski, Director of Student Records, Curriculum and Compliance

Executive Team (E Team)

- Purpose The SPH Executive Team considers issues of concern and provides direction to advance the mission, vision and goals of the School, including policy development and implementation, strategic plans, organizational structure, and programmatic priorities.
- Composition The SPH Executive Team includes the dean, four division heads (biostatistics, environmental health sciences, epidemiology & community health, and health policy & management); three associate deans (faculty affairs, education, research); three assistant deans (admissions, student engagement, learning innovations), executive administrative leaders (chief financial and administrative officer; chief of staff; chief development officer; communications director; director of diversity, equity & inclusion; IT director), and the chairs of the faculty, staff, and student governance and advisory committees: education policy committee (chair); faculty consultative committee (chair and at-large member); SPH professional & administrative staff senate (chair); staff association (chair); and student senate (president).
- Current Membership
 - Timothy Beebe, Interim Dean
 - o Jeff Bender, Professor
 - Sarah Bjorkman, Director of Communications
 - o Emily Dunsworth, Assistant Dean of Recruitment & Enrollment
 - Lynn Eberly, Associate Dean of Faculty Affairs
 - Lauren Eldridge, Director of Diversity, Equity & Inclusion
 - o John R. Finnegan, Jr., Dean Emeritus (retired 1/31/2022)
 - Bruce Alexander, Environmental Health Sciences Division Head
 - o Tamara Hink, interim Chief Financial Officer
 - o Jeff Johnson, Director of IT
 - Sara Hurley, Assistant Dean of Learning Innovations
 - Tracey Kane, Assistant HR Director
 - Joeseph Koopmeiners, Biostatistics Division Head
 - Eva Enns, Faculty Consultative Committee Chair
 - o Dianne Neumark-Sztainer, Epidemiology & Community Health Division Head
 - Jennifer Porter, Assistant Dean for Enrolled Student Experience
 - o Susan Rafferty, Chief of Staff
 - Marizen Ramirez, Associate Dean of Research
 - o Elizabeth Wattenberg, Associate Dean of Education & Student Engagement
 - o Julian Wolfson, Education Policy Committee Chair
 - Faculty Consultative Committee, TBD
 - P&A TBD
 - Staff TBD
 - Emily McGuire, Student Senate President

Faculty Consultative Committee (FCC)

- Purpose The FCC is responsible for studying and making recommendations to the faculty, the dean, and school leadership regarding matters of concern to the faculty of the school. It represents, discusses, and seeks action on behalf of the faculty. The FCC is a faculty advisory committee in the SPH.
- Composition Members include faculty elected to the policy council, with one faculty member from each division elected by secret ballot by the voting faculty of their division and three additional at-large faculty members from the school, nominated and elected by secret ballot of the voting faculty of the school. Terms are three years.

- Current Membership
 - Eva Enns, chair (year 3)
 - Peter Huckfeldt, HPM rep (year 2)
 - Eric Lock, BIO rep (year 1)
 - Xianghua Luo, faculty at large (year 2)
 - Ruby Nguyen, EpiCH rep (year 1)
 - Jim Pankow, faculty at large (year 2)
 - Irina Stepanov, EnHS rep (year 3)

Recognition, Awards, and Honors Committee (RAH)

- Purpose The RAH committee recognizes outstanding contributions by members of the school community and its alumni, including seeking and reviewing nominations and making recommendations for internal and external awards. This committee serves as an advisory committee in the SPH.
- Composition Membership includes one faculty member from each division, one student, one civil service/bargaining unit staff, one academic professional and administrative staff, and a representative of the SPH alumni society. Vacancies are filled through appointment by the dean upon recommendation of the respective division head, or president/chair of the student Senate, staff association, P&A senate, or alumni society. The term for committee members is three years, the Schuman Award recipient, alumni, and student terms are one year.
- Current Membership
 - Saonli Basu, BIO (year 3 of 3)
 - Sonya Brady, EpiCH (year 2 of 3)
 - Dori Cross, HPM (year 2 of 3)
 - Claudia Muñoz-Zanzi, EnHS (year 1 of 3)
 - Mariana Tuttle, Civil Service/Bargaining Unit Rep (year 1 of 3)
 - Anne Marie Hotop, P&A Senate Rep (year 2 of 3)
 - Cailynn Aumock, Student Senate Rep (year 1 of 1)
 - TBD "2022 Schuman Award Recipient" (1 Year term)
 - Monica Palese, SPH Alumni Rep (year 1 of 1)
 - Lynn Eberly, Associate Dean for Faculty Affairs (ex officio)
 - Stefannie Thompson, Faculty Affairs Administrator

Research Committee

- Purpose To date, the research committee has been responsible for making recommendations to the dean regarding distribution of special school research funding. The associate dean of research currently is expanding the committee's focus to serve as an advisory committee advancing the research mission and strategies.
- Composition Committee membership includes one faculty member from each division, two students, and one academic professional and administrative staff. Vacancies are filled through appointment by the dean upon recommendation of the respective division, student Senate president, or P&A Senate chair.
- Current Membership
 - Ryan Demmer, EpiCH (year 1 of 3)
 - Hyun Kim, EnHS (year 3 of 3)
 - Helen Parsons, HPM (year 1 of 3)
 - Baolin Wu, BIO (year 3 of 3)
 - Anne Marie Hotop, P&A Staff (year 2 of 2)
 - Robert Brehm, SPH Student Senate (year 1 of 1)
 - Courtney Sarkin, SPH Student Senate (year 1 of 1)
 - Marizen Ramirez, Associate Dean for Research ex officio
 - o Stefannie Thompson, Faculty Affairs Administrator ex officio

Staff Association

- Purpose The staff association addresses issues of concern to the civil service/bargaining unit staff in the SPH. This group advises and makes recommendations to division heads, the policy council, or the dean on matters of concern to the civil service/bargaining unit staff. It recommends civil service/bargaining unit staff to serve on standing committees or ad hoc committees of the school when such membership is deemed appropriate by the dean. The staff association shall review and comment upon proposed revisions to the school's constitution or bylaws before these are submitted to the voting faculty for ratification. Beginning in 2021, the staff association and P&A Senate hold joint meetings. This committee serves as an advisory committee in the SPH.
- Composition The membership of the staff association includes one civil service/bargaining unit representative from each division, and a total of one for all the central administrative offices in the school. Each division with more than 100 civil service/bargaining unit staff of at least 75 percent time elects a second member. Elected members serve terms of two years, with the terms staggered so that no more than 50 percent of the elected members are new each year. The election takes place in the spring semester for the new academic year.
- Current Membership
 - Jill Anderson, EpiCH (year 2 of 2)
 - Joy Archibald, EnHS (year 1 of 2)
 - Ginger Hughes, EpiCH (year 2 of 2)
 - Mariana Story Tuttle HPM, (year 2 of 2)
 - TBD, BIO (year 1 of 2)
 - Melissa Wuori, Dean's Office/Central Unit (year 2 of 2)

Student Senate

- Purpose The student senate serves as the governing body for SPH students and attempts to improve all aspects of graduate and professional education, while creating a positive environment for students to learn, work and socialize. The student senate provides a voice for students and allows them to participate in student government, plan social activities, network with other students and faculty, demonstrate leadership skills, and develop creative solutions to new challenges. The miss of the SPH student senate is to serve as a liaison between the students, faculty, and staff and to assist student organizations in hosting school-wide events. Senate representatives participate in a number of school and university-level groups including: SPH executive team, UMN council of graduate students, UMN Center for Health Interprofessional Programs, among others.
- Composition Each division will have one senator to represent up to 30 students, with divisions exceeding 30 students permitted additional senators based on the student population. Student senators are elected to serve for an academic year.
- Current Membership
 - Joseph Akambase, EpiCH
 - Victoria Anderson, HPM
 - Taiwo Aremu, EnHS
 - Adetunji Bakare, EpiCH
 - o Robert Brehm, HPM, Director of Communications
 - Eileen Bourland, EpiCH
 - Sylvia Gutierrez, EpiCH, Secretary
 - o Hodan Hachi, EnHS
 - Foster Jacobs, EnHS
 - Yiyao Jin, BIO
 - Alex Kurutz, EnHS
 - o Talor Lees, EpiCH
 - Emily McGuire, EpiCH, President
 - o Rebecca Molinsky, EpiCH

- Julia Ngep, HPM, Director of Finance
- Alina Okamoto, HPM
- Cynthia Pando, HPM
- Courtney Sarkin, HPM
- Sarah Steffen, EpiCH, Vice President
- Moriam Yarrow, HPM
- Aanu Ayeni, ex officio
- o TH Tran, ex officio
- Puleng Moshele, ex officio
- Christopher Schmitt, ex officio

Two newly formed groups—the DEI Action Alignment Team and the Campaign Cabinet—focus on significant school priorities.

Campaign Cabinet

The SPH Campaign Cabinet serves as the overall coordinating body for the school's "Driven: Shaping a Future of Health campaign." The cabinet provides leadership, energy, and visibility. Esteemed members of our community join with several SPH leaders to guide the philanthropic efforts (see <u>Campaign Cabinet</u> <u>membership</u>).

Other significant ad hoc committees focus on setting academic and administrative direction and ensuring alignment. The biweekly internal operations meeting includes the dean and his direct reports (except for the four division heads). The biweekly deans meeting includes the dean, the associate deans, and the chief of staff. The monthly division administrators meeting includes the four division administrators, chief financial and administrative officer, assistant director of finance, chief of staff, and assistant director of human resources.

The dean, as chief executive officer of the school, heads the <u>SPH Leadership Team</u>. That team, which meets at least monthly, includes the four division heads (biostatistics, environmental health sciences, epidemiology & community health, and health policy & management); three associate deans (faculty affairs, education, research); chief of staff; chief financial and administrative officer; and other executive staff (chief development officer; communications director; and director of diversity, equity & inclusion) on occasion. Each reports directly to and meets at least monthly with the dean, who annually evaluates their performance. In the case of division heads and associate deans, this includes both administrative and academic performance.

During the COVID-19 pandemic, the school pivoted to holding virtual meetings—at first weekly, now monthly—to ensure continuity of operations. These meetings include school and division leaders as well as faculty and staff governance and consultative committee leaders. To support engagement, it also introduced ritual community forums every other month, now quarterly, for faculty, staff, and students to gain more in-depth information and to contribute to shaping the school's direction and approach on significant issues.

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

Current Programs

MPH/MS degrees: Each program determines curriculum degree requirements to include public health core, program core and electives options. In the event of major curricular changes, programs are required to send updated curriculum requests to the SPH Educational Policy Committee (EPC). EPC reviews the changes and votes to approve, not approve, or to extend the discussion if needed to avoid redundancy.

Regular curriculum review occurs at the program and division level. Major changes are reflected in the UMN curriculum system (PCAS)/catalog.

NEW Program Development

MPH/MS degrees: Each program has their own curriculum committee and develops a proposal to include a description, curriculum, admissions criteria, advising faculty, career outlook, and other resource information. The program submits a detailed proposal to the SPH EPC for review. EPC reviews, provides feedback, and if the program is approved, the SPH dean submits the proposal to the Provost's Office for Regent's approval.

The process is quite rigorous and follows UMN Board of Regent's requirements (see university administrative policy, <u>Academic Unit Authority over the Curriculum and Major: Twin Cities, Crookston,</u> <u>Morris, Rochester</u>). All program curriculum is listed on the SPH website.

Dual Degrees

Dual degrees are developed by the program in consultation with academic programs. Both programs must establish admission requirements and specific information pertinent to the school's requirements.

Awarding of Degrees

The director of student records, curriculum and compliance oversees the awarding of the professional degrees (MPH, MHA and certificates). Review of records takes place through a degree clearance and auditing system (Graduate and Professional Auditing System, or GPAS) to ensure degree requirements are met.

The graduate school oversees and awards the MS and PhD degrees using the GPAS system to meet program requirements. This includes biostatistics, clinical research, environmental health, epidemiology and community health, and health services research policy and administration.

b) Curriculum design

The programs are responsible for determining degree requirements. Curriculum sheets are updated regularly; however, students follow the curriculum for the term and year they were admitted. This information can also be found on the SPH website and in the program specific student guidebook.

c) Student assessment policies and processes

Program faculty determine methods of assessment and grading rubrics for their courses. The school's educational policy committee determines academic standards, policies, and processes. Divisions may have additional policies and procedures pertaining to their MPH or MS degree programs as well as other accreditation requirements. Master of Science and doctoral programs establish policies and processes consistent with the policies and procedures of the Graduate School. All SPH students receive a student guidebook for the term they are admitted that provides a wealth of information including curriculum, policies and procedures.

d) Admissions policies and/or decisions

Recruitment:

Masters student recruitment is overseen by the associate dean for education and student engagement and the assistant dean for recruitment and enrollment. Recruitment includes outreach to students at universities, attending ASPPH events, participation in the Public Health Powerhouse consortium, as well as campus-based events such as open houses and admitted student day. Additional recruitment program activities are program-specific and created in collaboration with the individual programs. The doctoral programs conduct their own recruitment activities throughout the academic year. These activities culminate in on-campus admitted student visits coordinated by the program coordinators and directors of graduate studies. Faculty, program coordinators, and student ambassadors frequently meet with prospective students individually and participate in the recruitment activities described above in order to support recruitment of master's and doctoral students. The SPH website is updated regularly with program specific application, admission, curriculum information as well as other educational options (e.g., dual degrees, minors, certificates).

Admissions:

The school's admissions process for masters students is managed by the associate dean for education and student engagement and assistant dean for recruitment and enrollment. The overall process makes use of the centralized Schools of Public Health Application Service (SOPHAS) application process. Each program develops policies in concert with the educational policy committee and in accordance with general policies at the University of Minnesota. For doctoral programs, admissions decisions are made by program faculty and overseen by each program's director of graduate studies, and each program develops policies consistent with general policies of the University of Minnesota graduate school. Across all degrees, decisions to admit students are made by faculty members in each program, sometimes meeting as committees, who consider standard criteria such as letters of recommendations, statement of purpose, undergraduate transcripts/grades, experience, diversity, etc. Each program has guidelines for admission decisions. The instructions and requirements are published on the website. The school's education policy committee establishes general policies concerning admissions. Programs annually, along with the CFO, set enrollment goals for each program. The director of graduate studies determines doctoral student enrollment targets based on potential funding available and advisor capacity.

e) Faculty recruitment and promotion

Please note: A brief summary of this process is presented below. A very detailed and extensive description of the process is available in the Electronic Resource File, Criterion A folder, A1.2 subfolder.

Faculty Recruitment and Appointment

The SPH processes align with the University administrative policy, <u>Hiring Faculty and Staff</u>, and involve decision-making by search committees, division heads, the dean, and, in the instances of new hires with tenure, the provost and board of regents. As part of the school's antiracism strategic plan, these processes are being redesigned with the goals of creating more equitable and inclusive processes and further diversifying our faculty to better reflect our student body and communities that we serve.

The recruitment phase first involves consultation and decision-making between the Dean and the Division Head for approval for the hire. Next, SPH human resources works with the Division Head to launch the search and form a search committee made up of faculty. The search committee assesses the candidate pool and selects candidates to invite to confidential, remote interviews. The finalists are invited to participate in on-campus interviews with key stakeholders. The Division Head reviews feedback from the public interview process and references. The Division Head makes an offer to the top candidate in consultation with the Dean.

Promotion and Tenure

The Appointment, Promotion and Tenure Policy for SPH can be found here.

- 1. The faculty candidate creates a dossier of their accomplishments, which aligns with the Appointment, Promotion and Tenure Policy.
- 2. Division faculty reviews, discusses and votes for recommendation of promotion and tenure.
- 3. The division head makes a personal recommendation (note: according to the UMN the division level reviews and votes are non-binding as the SPH itself is considered a department).
- 4. The dossier is sent to external reviewers for evaluation.
- 5. The SPH Appointment, Promotion and Tenure Committee reviews, discusses and votes for recommendation of promotion and tenure.
- 6. SPH faculty reviews, discusses, and votes for recommendation of promotion and tenure.
- 7. The dean reviews and makes recommendation of promotion and tenure.
- 8. The UMN Promotion & Tenure Committee reviews, discusses, and votes for recommendation of promotion and tenure.

- 9. The UMN Provost reviews and makes recommendation of promotion and tenure to Board of Regents.
- 10. The Board of Regents makes promotion and tenure decision.

f) Research and service activities

Faculty develop their own independent research portfolios, leveraging research resources available from divisions and the school's Office of Research to conduct their scholarship. Faculty work with division administrators and human resources to hire research staff and identify research office and laboratory space. Faculty also have access to research centers based in the school (e.g., Upper Midwest Center for Agricultural Safety and Health, Center for Antiracism Research, Rural Health Research Center) and school wide work groups (e.g., health equity work group, aging work group, global health work group) for networking, content/methodologic expertise, and funding opportunities. Some additional research resources are available through the Office of the Vice President for Research (listed here) and the Office of Academic Clinical Affairs (listed here).

Students and postdoctoral fellows also engage in research, under the guidance of faculty mentors. Additional campus resources, such as funding, travel grants, and workshops, specifically support research activities pursued by graduate students and post-docs.

Researchers receive support and approvals at the division and school levels. Sponsored Projects Administration (SPA), a University-wide office, holds authority to submit research proposals and receive awards from external sources on behalf of the Board of Regents of the University of Minnesota. SPA also serves as the fiduciary on grant-related matters.

The associate dean for research has developed a strategic plan to promote innovative and collaborative research and to enhance support for research across the SPH.

To ensure ethical and safe conduct of research, faculty and staff at UMN SPH must complete the responsible conduct of research training, and depending on the type of research conducted, faculty, staff and students may also require training in human research protections, animal care and research training, and health and safety training involving research with biohazardous materials, radiation or working in a research laboratory. https://research.umn.edu/ethics-compliance/research-compliance-training-guide

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.

The school's <u>constitution</u> and <u>bylaws</u> set forth many of the rights and obligations of the individuals and committees in the school's governance. At a broader school governance level, executive management and administrative authorities flow from the Board of Regents to the president, provost, and school's dean pursuant to the university administrative policy, <u>President's Delegation of Authorities</u>. Under that policy, the dean's authorities are outlined in two delegation of authorities documents. Find copies of the SPH constitution and delegation of authorities documents in the Electronic Resource File, Criterion A folder, A1.3 subfolder.

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.

SPH faculty contribute to decision-making activities in the University of Minnesota by serving on committees external to SPH as well as service in leadership positions throughout the institution. These committees work to advance governance, improve faculty policy and procedural initiatives, sustain and improve research integrity, and affect larger climate issues such as improving the environment to

advance success of faculty women and the prevention of sexual misconduct with students, faculty, and staff. Examples are shown below.

The associate deans for research, faculty affairs, and education and student engagement participate in the following University of Minnesota committees:

Marizen Ramirez, Professor and Associate Dean for Research

- Council of Research of Associate Deans
- Research Committee for the President's Initiative to Prevent Sexual Misconduct
- Opioid Advisory Task Force Leadership Committee

Lynn Eberly, Professor and Associate Dean for Faculty Affairs

Council of Faculty Affairs Associate Deans

Elizabeth Wattenberg, Professor and Associate Dean for Education and Student Engagement

- Academic Health Sciences Associate Deans and Program Directors Committee
- Graduate Associate Deans committee
- Professional Education Council

Examples of faculty service in University of Minnesota leadership positions and committees are presented below:

- Sonya Brady, Associate Professor, Co-Chair of the Student Education & Engagement Committee for the President's Initiative to Prevent Sexual Misconduct
- Simone French, Professor, Member of the Social and Behavioral Committee of the Institutional Review Board
- Linda Frizzell, Associate Professor, Chair of the University Senate's Social Concerns Committee
- Carrie Henning-Smith, Associate Professor, Co-lead of the Women's Faculty Cabinet
- David Jacobs, Professor, Co-Chair of the Faculty Senate Health Sciences Faculty Consultative Committee (f/k/a Academic Health Center Faculty Consultative Committee)
- Michael Oakes, Professor, Interim Vice President of Research
- Jim Pankow, Senate Committee on Finance & Planning
- Lisa Peterson, Professor, Member of the Climate Support Network, President's Initiative to
 Prevent Sexual Misconduct
- Peter Raynor, University P&T (Promotion & Tenure)
- Matt Simcik, Graduate School Advisory Board
- Irina Stepanov, Professor, Director of the Institute for Global Cancer Prevention
- Weihong Tang, Associate Professor, Member of the Women's Faculty Cabinet

Several SPH faculty and staff actively participate in the University governance system (see 2021-22 SPH committee memberships from the University Senate Office), including these two primary governance bodies with these responsibilities:

- University Senate: has general legislative authority over administrative matters concerning more than one campus or the University as a whole and offers advice to the president on budget, educational policy, and research issues;
- Faculty Senate: has general legislative authority over faculty welfare, educational, and research matters concerning more than one campus or the University as a whole; general advisory responsibilities for matters related to the University budget; primary responsibility for educational and research policies; providing advice to the president concerning the University's budget, accreditation, designation and granting of University honors, policies concerning faculty appointment and tenure, and matters within the jurisdiction of the Faculty Affairs and Judicial Committees.





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.

In each of the four divisions, SPH faculty interact with their colleagues formally in monthly faculty and committee meetings, and regularly scheduled division seminar offerings. Each division head has formed a faculty executive or consultative committee to provide input and guidance on division strategic and administrative planning and operations. At the division level, faculty regularly interact with each other based on research areas through research pods (in EpiCH) or centers.

At the school level, the associate dean for faculty affairs facilitates faculty gatherings by rank to discuss shared issues and promote connections across the divisions: assistant professors (monthly), associate professors (quarterly), and full professors (occasionally). Most recently, the three associate deans have sponsored various development opportunities and workshops for faculty.

Two school-wide faculty meetings each year focus on appointment, promotion, and tenure matters. Since January 2020, SPH has provided comprehensive school updates and interactive strategic planning sessions with the faculty separate from the December fall faculty meeting. Since May 2015, the dean has presented the state of the school address and school awards are given at the annual Faculty and Staff Recognition Celebration separate from the spring faculty meeting. (Note that a university-wide freeze prevented school awards in 2020 and 2021 so the annual celebration included only state of the school

addresses.) Please find examples of supporting documentation for faculty and committee meetings in the Electronic Resource File, Criterion A folder, A1.5 subfolder.

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

Strengths

- Each division executes its own organization and meeting structure, the different approaches appear effective and inclusive for faculty, staff, and student involvement in the division.
- The two school staff governance groups benefit from meeting jointly, thereby leveraging their resources for better self-organization/management and jointly identifying issues of concern for advocacy and consultation.
- The school adopted a practice of a small stipend to the chairs of the major SPH governance committees (APT, EPC, and research committee) to recognize their service and effort.
- Community forums, an initiative launched during the pandemic, have become a valuable tool to break down silos in the school and bring students, faculty, and staff together regularly to learn about and discuss matters of importance in the school.

Weaknesses

- We have faced difficulty recruiting chairs for school governance and consultative committees, as well as in implementing succession plans to maintain continuity of knowledge, while also creating both momentum and consistency across academic years.
- Planning and decision-making can be impeded by a siloed culture.
- Staff representation being tied to involvement in one of the staff governance bodies can result in the same voices on several school committees.

Plans for Improvement

- Increase ways that faculty, staff, and students participating in university level governance can gather input from school colleagues and more effectively disseminate information about issues, discussions, and decisions.
- Better promote opportunities for faculty, staff, and student involvement in all levels of governance.
- Develop and provide orientation to incoming school governance members/committees.
- Update the school's constitution and bylaws.

A2. Multi-Partner Schools (applicable ONLY if functioning as a "collaborative unit" as defined in CEPH procedures)

This criterion is not applicable.

A3. Student Engagement (SPH and PHP)

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

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

Students participate at both school and programmatic levels within the School of Public Health (SPH) in order to inform policy and decision-making. Student representatives participate in standing SPH committees, meet quarterly with the dean, and hold positions within many committees and groups, including staff and faculty search committees; diversity, equity and inclusion committees; student recruitment committees, and other advisory groups.

SPH Committee Representation

Education Policy Committee:

The SPH student senate president represents students on this committee.

- 2018–19: Jayda Palmer, MPH/EpiCH
- 2019–20: Zach Manio, MPH/EpiCH
- 2020–21: Ian Passe, MPH/EnHS; Emily McGuire MPH/CHP
 - An additional ex officio student representative was added to the EPC curriculum subcommittee for the 2020–21 academic year.
- 2021-22: Emily McGuire MPH/CHP

Executive Team (E-Team):

The SPH student senate president represents students on this committee.

- 2018–19: Jayda Palmer, MPH/EpiCH
- 2019–20: Zach Manio, MPH/EpiCH
- 2020–21: Ian Passe, MPH/EnHS
- 2021-22: Emily McGuire MPH/CHP

Diversity, Equity & Inclusion Action Alignment Team (Launched Fall 2020)

- 2020–21: Susana Carlos, MPH/EpiCH; Asha Elgonda, MPH/EpiCH; Gabbi Horsford, MPH/CHP
- 2021-22: Victoria Nguyen, MPH/EpiCH; Asha Elgonda, MPH/EpiCH; Delaine Anderson, MPH/MCH

Orientation Planning Committee

- 2018–19: No student this AY
- 2019–20: Alyse Haven, MPH/MCH
- 2020–21: Alina Okamoto, MHA/HPM
- 2021-22: No student this AY

SPH Alumni Society

- 2018–19: Zach Maino, MPH/Epi
- 2019–20: Christopher Schmitt, MPH/E-PHAP; Jacquelyn Cassman, MPH/EnHS
- 2020–21: Christopher Schmitt, MPH/E-PHAP; Puleng Moshele, PhD/Epi
- 2021–22: Adey Fentaw, MPH/PHAP; Puleng Moshele, PhD/Epi

Division Representation

Division of Epidemiology and Community Health (EpiCH) students have additional opportunities for involvement at the concentration level. The EpiCH Division Training Committee includes representation from each program within the division and meets monthly to create education policy for the division. PhD student leads provide feedback and serve in an advisory role to inform various aspects of their program (Part A exam, orals, milestones, etc.). Two to four students currently serve in this capacity. Additionally, in fall 2020, EpiCH launched the Diversity, Equity & Inclusion Committee which includes two graduate assistants who serve on student services groups to inform policy and provide feedback.

EpiCH Division Training Committee

- 2018–19
 - Sabrina Khwaja MPH/CHP
 - Peter Boersma MPH/Epi
 - Megan Coleman MPH/MCH
 - Kelly Olzenak MPH/PHN
 - Spruha Joshi PhD/Epi
- 2019–20
 - Hillary Lor MPH/CHP
 - Stefani Aleman MPH/Epi
 - Jeannette Fernandez-Baca MPH/MCH
 - Noelle Yeo MPH/PHN
 - Faye Norby PhD/Epi
- 2020–21
 - Hannah Kinzer MPH/CHP
 - Lauren Duval MPH/Epi
 - Taylor Lees MPH/MCH
 - Erika Swant MPH/PHN
 - Eileen Delehanty PhD/Epi
- 2021-22
 - Madeline Levine-Wolf MPH/CHP
 - Madalyn Nones MPH/Epi
 - Taylor Lees MPH/MCH
 - Joshua Bentley MPH/PHN
 - Katie Berry- PhD/Epi

Division of Health Policy & Management (HPM) students have additional opportunities for involvement at the concentration level. The Masters in Healthcare Administration (MHA) concentration has its own Executive Board registered as a student group representing each cohort of the MHA student body. In early 2020, HPM developed positions specifically related to diversity, equity, and inclusion initiatives in each student cohort; student DEI representatives also serve on the Alumni Association/Foundation (AA/F) Board and provide input to the AA/F regarding program-related experiences. Students in Public Health Administration & Policy (PHAP) have student representatives who serve in an advisory capacity and liaise between their peers in the program and the program leadership team. These representatives also attend HPM division faculty meetings.

MHA Executive Board Presidents

- 2018–19: Jay Zachman
- 2019–20: Michael Labrador
- 2020–21: Ann Westin Sistrunk
- 2021-22: Gavin Reynolds

The Division of Biostatistics has a number of committees for students to engage in decision-making. Students serve on the division's education, recruitment, and outreach committee. Students may also initiate committees to work on issues otherwise unaddressed. Finally, this division also launched a Diversity, Education & Inclusion Committee in 2018 to address issues of DEI within the program.

The Division of Environmental Health Sciences includes students in the curriculum committee. The Division of Environmental Health Sciences students also have more informal methods for involvement. They have attended faculty meetings to express concerns of institutional racism and exclusionary curriculum and they assist with diversity, equity, and inclusion initiatives.

Student Organizations

Collectively, students represent their interests through various student groups. SPH Student Senate serves as the student governing body for the school. This group provides a liaison between students, faculty, and staff, and hosts school-wide events. The Student Senate provides a collective voice for public health students within SPH and the wider University through the Professional Student Government and Council of Graduate Students.

SPH Student Senate

- Presidents
 - o 2018–19: Jayda Palmer, MPH/Epi
 - o 2019–20: Zach Manio, MPH/Epi
 - o 2020–21: Ian Passe, MPH/EnHS
 - 2021-22: Emily McGuire MPH/CHP

Additional SPH Student groups include:

- Diversity Network
- Maternal and Child Health Interest Group (MCHIG)
- MHA Community Stewardship Initiative
- Public Health Review
- Undergraduate Public Health Association (UPHA)

SPH also collaborates with the Center for Health Interprofessional Programs (CHIP). CHIP is positioned centrally within the health sciences schools to encourage interdisciplinary opportunities to connect, collaborate, network, and develop. An SPH representative serves on the CHIP Executive Council and SPH programs/faculty partner to advise a number of other student groups.

CHIP Executive Council - SPH representatives

- 2018–19: Jayda Palmer, MPH/Epi
- 2019–20: Zach Manio, MPH/Epi; Devon Saurer, MPH/Epi
- 2020–21: Julia Ngep, MPH/PHAP; Amy Lamb, MPH/CHP
- 2021-22: Julia Ngep, MPH/PHAP; Mackenzi Marquette, MPH/PHAP

Additional CHIP Organizations include:

- CLARION
- Health Student for a Health Climate (HSHC)
- Institute for Healthcare Improvement Open School (IHI)
- Collaboration between Medical School and MHA program
- Health Students for a Healthy Climate
- Pride in Healthcare
- Public Health Advocacy Student Alliance

University Wide Professional Student Government (PSG)

• 2018–19: Megan Coleman, MPH/MCH; Matt Rundle, MPH/PHAP

- 2019–20: Caroline Sell (Dual Degree MPH/JD, Vice President); Matt Rundle, MPH/PHAP; Ian Passe, MPH/EnHS
- 2020–21: Erika Swant, (MPH/PHN, Senate Secretary); Ian Passe, MPH/EnHS; Taylor Lees, MPH/MCH
- 2021-22: Emily McGuire MPH/CHP; Taylor Lees, MPH/MCH

Council of Graduate Students (COGS)

- 2020-2021
 - o Madison Anderson, Vice President, PhD/Epi
 - Yiyao Jin, MS/Biostat
 - o Foster Jacobs, PhD/EnHS
 - Rebecca Molinsky, PhD/Epi
 - Cynthia Pando, PhD/HSRPA
- 2021-2022
 - o Jimmy Campbell, PhD/HSRPA

University Senate

- 2018-19: Grace Lyden, PhD/Biostat; Benjamin Nicla, MS/HSRPA
- 2019-20: Keelia Silva, MPH/PHAP & Cynthia Pando, PhD/HSRPA
- 2020-21: Emily McGuire, MPH/CHP
- 2021-22: Emily McGuire, MPH/CHP

Health Sciences Student Consultative Committee

- 2018-19: Maya Griefer, MPH/PHAP
- 2019-20: Keelia Silva, MPH/PHAP; Cynthia Pando, PhD/HSRPA
- 2020-21: Cynthia Pando, PhD/HSRPA
- 2021-22: Cynthia Pando, PhD/HSRPA

2) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area. (self-study document)

Strengths

- The SPH Student Senate has serves as a strong voice for the SPH student body, maintaining open communication with the SPH dean through quarterly meetings. The Student Senate is well integrated into the various committees within SPH, and additional opportunities became available for student representation during the last academic year.
- The Division Training Committee within the Division of EpiCH involves students at the local programmatic level and is well structured to ensure continual student representation each year.
- SPH recently hired an assistant dean for enrolled student experience. This dean, a strong student advocate, supports students across all SPH programs, from orientation through commencement. The goal is to ensure students are aware of opportunities, resources, and staff available to them within SPH and the broader University.

Weaknesses

- Student involvement in policy and decision-making shows inconsistency at the program level across all four divisions within SPH.
- Student representation is often tied to involvement in a student group, such as SPH Student Senate, creating limited representation on school committees.
- Although MPH students tend to have more time for engagement activities, ensuring PhD student representation can be challenging.

Plans for Improvement

- Develop a student group guidebook for initiating student groups, maintaining group activities, and transitioning to new academic years. Not only will the guidebook help ensure compliance with SPH and University policies, but it will also outline opportunities for communicating student group efforts to the broader student community in order to encourage greater participation and collaboration between groups.
- Leverage EpiCH Division Training Committee model and explore its transferability to other divisions to increase student engagement across SPH.
- Identify process/communication methods to share important decisions and policies to the broader student community in order to foster inclusivity even among students not involved in a student organization/group.

A4. Autonomy for Schools of Public Health (SPH only) A school of public health operates at the highest level of organizational status and independence available within the university context.

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

Required documentation:

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 six colleges and schools of the health sciences, and one of 18 academic units in the University of Minnesota. The <u>dean's administrative authority is delegated</u> from the Board of Regents through the president. Academic authority over the education program and curricula lies with the school's faculty and dean acting collaboratively, as is true for the appointment, promotion, and granting of tenure to faculty. The dean reports directly to the provost, as do all other deans of academic units. The provost also conducts 360 performance evaluations for the dean following each five years of service.

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.

Levels of autonomy and reporting lines are the same for the School of Public Health as for other academic units.

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

None. Although we note here that a former weakness, whereby the SPH dean and other health science deans had dual reporting relationships to the provost and the vice president for the academic health center (who also served as dean of the medical school) was eliminated in 2018 during reorganization of the Academic Health Center. Since that time, all deans of health sciences schools and colleges have a single reporting line to the provost and executive vice president.

A5. Degree Offerings in Schools of Public Health

A school of public health offers a professional public health master's degree (e.g., MPH) in at least three distinct concentrations (as defined by competencies in Criterion D4) and public health doctoral degree programs (academic or professional) in at least two concentrations (as defined by competencies in Criterion D4). A school may offer more degrees or concentrations at either degree level.

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

The School of Public Health has a variety of graduate programs including:

- 8 MPH programs
 - Community Health Promotion
 - Environmental Health
 - o Epidemiology
 - Maternal & Child Health
 - Public Health Administration & Policy
 - o Public Health Data Science
 - Public Health Nutrition
 - Public Health Practice
- 5 MS programs
 - Biostatistics
 - o Clinical Research
 - Environmental Health
 - o Epidemiology
 - Health Services Research Policy & Administration
- 4 PhD programs
 - Biostatistics
 - Environmental Health
 - o Epidemiology
 - Health Services Research Policy & Administration
- 1 MHA program
 - Healthcare Administration

The SPH also offers joint degrees with 11 different University schools and colleges.

- Business Administration: MHA/MBA
- Dentistry: MPH/DDS (Public Health Practice)
- Human Rights: MPH/MHR (Public Health Practice)
- Law:
 - o MPH/JD
 - Public Health Practice
 - Public Health Administration & Policy
 - Community Health Promotion
 - Environmental Health
 - Epidemiology
 - Maternal & Child Health
 - o MS/JD
 - Environmental Health
 - Health Services Research Policy & Administration
 - o MHA/JD

- o PhD/JD
 - Health Services Research Policy & Administration
- Medicine:

•

- MPH/MD: Public Health Medicine (Public Health Practice)
- o PhD/MD
 - Epidemiology
 - Health Services Research Policy and Administration
- Nursing: MPH/DNP (Public Health Practice)
- Pharmacy: MPH/PharmD (Public Health Practice)
- Public Policy: MPH/MPP (Public Health Practice)
- Urban & Regional Planning: MPH/MURP (Public Health Practice)
- Social Work:
 - o MPH/MSW
 - Community Health Education
 - Maternal & Child Health
- Veterinary Public Health: MPH/DVM (Public Health Practice)

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

The official catalog is maintained by the UMN and updated in advance of course registration by SPH staff twice per year. Below is the link to the SPH graduate programs catalog:

 https://onestop2.umn.edu/pcas/viewCatalogSearchResults.do?campusId=UMNTC&userDefinedS earch=true&keywords=&careerId=+&programType=+&strm=1223&programDelivery=+&fieldOfSt udy=+&acadGroups=TPUB&_acadGroups=1

The School of Public Health website also offers comprehensive curriculum information where students can search by degree, program, or division:

<u>https://www.sph.umn.edu/academics/</u>

B1. Guiding Statements

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

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

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

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

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

The School of Public Health's guiding statements reflect the University of Minnesota's founding charter. The University of Minnesota is: "... founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to the benefit of the people of the state, the nation and the world."

In 2020, SPH modified and approved our guiding statements with broad input from faculty, staff, students, and alumni during a school-wide review process (September – November) overseen by the accreditation coordinating team as led by the associate dean for education and student engagement. We subsequently <u>published</u> the updated guiding statements on the SPH website.

Vision

A world in which all people thrive throughout their lives with optimum health and well-being.

Mission

The School of Public Health improves the health and well-being of populations and communities around the world through excellence in research and education, and by advancing policies and practices that sustain health equity for all.

Goals

- **Goal 1 Education:** Provide students with the knowledge, skills, and experience to become leaders in public health practice and research.
- **Goal 2 Research:** Conduct, translate, and disseminate research to shape public health solutions, policies, and practices that will reduce health inequities.
- **Goal 3 Community Engagement:** Engage and collaborate with partners to advance learning, practice, and scholarship in public health.
- **Goal 4 Continuing Education:** Provide continuing education to professionals and community leaders in evidenced-based practices that improve health and well-being.
- **Goal 5 Diversity, Equity, and Inclusion:** Advance diversity, equity, inclusion, justice, and antiracism in our education, research, and community engagement.
Values

- **Health is a Human Right.** We hold that everyone has the right to the highest attainable standard of health and well-being.
- **Upstream Action Saves Lives.** We hold that disease prevention and health promotion are powerful, proven, and effective tools for tackling the world's health challenges. We focus on moving research into action to protect populations, shape policies, and create a healthier world.
- **Diversity and Collaboration Make Us Stronger.** We believe that diverse people, cultures, and lived experiences are sources of deep understanding and knowledge. Partnerships with diverse communities, colleagues, students, and experts across sectors produce superior research and education.
- **Our Future Depends on Education.** We hold that education, research, public engagement, and public policy are among the most important pathways to a just and equitable world. We prepare students to be effective researchers, teachers, practitioners, citizens, and health advocates. We educate the public health professional workforce in current knowledge and best practices. We communicate with the public about health challenges and solutions.
- **Bigger Imaginations Yield Better Results.** Our passion, excitement, and drive to advance health make the world a better place. The freedom to dig deeper and follow our intuition toward greater understanding allows us to see things with new eyes and to explore creative solutions.

Please find supporting documentation in the Electronic Resource File, Criterion B folder, B1.1 subfolder.

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

SPH2030: A Guiding Strategy to Meet the Needs of a Changing World

During our 2014 accreditation process, we conducted a strategic planning process called SPH2030. In January 2014, more than 75 percent of the faculty assembled for day-long presentations and structured discussions in which they looked ahead to 2030 and considered prospective public health challenges and academic priority areas in which SPH would need to be strong. The process produced a list of major public health priorities, including aging and health equity. The plan has helped guide several <u>faculty hires</u> and has re-energized the <u>Center for Healthy Aging and Innovation</u> with stronger community links. Faculty recognized that health equity needs to be front and center in their research. This ultimately led to the launch of the new Center for Antiracism Research for Health Equity. In <u>January 2020, the SPH faculty</u> revisited SPH2030 and updated it.

Recent emerging priority initiatives include developing an undergraduate major in public health and the Strategic Plan for Antiracism.

We describe the Strategic Plan for Anitracism in section G1: Diversity and Cultural Competence. Briefly, the director of diversity, equity, and inclusion (DEI) conducted a school-wide climate assessment in fall 2020. This assessment provided important insight into our school's multi-layered and complex culture. Importantly, the assessment highlighted the fact that we have not adequately prioritized DEI in admissions, recruiting, hiring, or other decision-making at the school. The overarching sentiment was that DEI must become a top priority for SPH. The <u>new strategic plan</u> provides a roadmap for change, and we began implementing this plan in July 2021. Please find supporting documentation in the Electronic Resource File, Criterion B folder, B1.2 subfolder.

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

Strengths

- The accreditation coordinating team gathered broad input on the guiding statements through faculty and alumni focus groups as well as through a survey distributed to all SPH faculty, students, and staff. We first developed values through a branding process conducted in 2015. Branding involved a formal and extensive set of activities including interviews and focus groups (see documents in ERF). In fall 2020, we reconfirmed the values that emerged from the 2015 branding process by gathering input for the overall guiding statements.
- The Strategic Plan for Antiracism establishes the foundation upon which we will incorporate and account for diversity, equity, inclusion, and antiracism throughout our education, research, and community engagement activities.

Weaknesses

- As we gathered input for our guiding statements, the enthusiastic participation of a broad range of stakeholders emphasized the importance of expanding opportunities for stakeholder participation in the continuing development of SPH goals and priorities.
- The COVID-19 pandemic posed a major barrier to progress on several of our priority areas for development, as faculty effort was redirected to COVID-19 research initiatives and remote teaching. In addition, plans and practices for work-life balance were disrupted for many SPH faculty, students, and staff, resulting in unprecedented stress and unexpected commitments.

B2. Graduation Rates

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

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

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

The following tables show the cohort graduation rate for MPH, MS, and PhD students. Please note that graduation data was pulled on February 1, 2022 thus does not encompass the entire 2021-22 academic year. Also find these same tables in the Electronic Resource File, Criterion B folder, B2 subfolder.

Students in MPH Degree, by Cohorts Entering Between 2017-2018 and 2021-2022								
*Maximum Time	to Graduate: 5 years							
	Cohort of Students	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022		
2017-2018	# Students entered	282						
	# Students withdrew, dropped, etc.	10						
	# Students graduated	3						
	Cumulative graduation rate	1%						
	# Students continuing at beginning of this school year (or #							
	entering for newest cohort)	269	278					
2018-2019	# Students withdrew, dropped, etc.	12	17					
	# Students graduated	124	2					
	Cumulative graduation rate	44%	1%					
	# Students continuing at beginning of this school year (or #							
0040 0000	entering for newest cohort)	133	259	249				
2019-2020	# Students withdrew, dropped, etc.	12	7	6				
	# Students graduated	57	136	3				

Template B2 - MPH

	Cumulative graduation rate	65%	50%	1%		
	# Students continuing at beginning of this school year (or # entering for newest cohort)	64	116	240	332	
2020-2021	# Students withdrew, dropped, etc.	6	12	7	14	
	# Students graduated	27	52	118	8	
	Cumulative graduation rate	75%	68%	49%	2%	
	# Students continuing at beginning of this school year (or # entering for newest cohort)	20	50	445	240	200
2021-2022	# Students withdrew, dropped, etc.	30	52	115	310	306
	# Students withdrew, diopped, etc.	0	0	0	0	0
	# Students graduated	1	6	9	6	0
	Cumulative graduation rate	75%	71%	47%	2%	0%

Template B2 - MS

Students in MS Degree, by Cohorts Entering Between 2017-2018 and 2021-2022								
*Maximum Tim	e to Graduate: 5 years							
	Cohort of Students	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022		
2017-2018	# Students entered	39						
	# Students withdrew, dropped, etc.	2						
	# Students graduated	1						
	Cumulative graduation rate	3%						
	# Students continuing at beginning of this school year (or # entering for newest cohort)	36	36					
2018-2019	# Students withdrew, dropped, etc.	0	0					
	# Students graduated	22	1					
	Cumulative graduation rate	56%	3%					
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	14	35	29				

	# Students withdrew, dropped, etc.	1	0	1		
	# Students graduated	5	1	0		
	Cumulative graduation rate	72%	6%	0%		
	# Students continuing at beginning of this school year (or # entering for newest cohort)	o	24	20	21	
2020-2021	# Students withdrew, dropped, etc.	0	 1	20	2	
	# Students graduated	0	16	12	3	
	Cumulative graduation rate	72%	50%	41%	10%	
	# Students continuing at beginning of this school year (or # entering for newest cohort)	7	17	16	26	41
2021-2022	# Students withdrew, dropped, etc.	0	0	0	0	0
	# Students graduated	1	9	3	1	0
	Cumulative graduation rate	74%	75%	52%	13%	0%

Template B2 - PhD

Students in PhD Degree, by Cohorts Entering Between 2014-2015 and 2021-2022									
*Maximum T	ime to Graduate: 8 years								
	Cohort of Students	2014- 2015	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
2014-2015	# Students entered	33							
	# Students withdrew, dropped, etc.	1							
	# Students graduated	0							
	Cumulative graduation rate	0%							
2015-2016	# Students continuing at beginning of this school year (or # entering for newest cohort)	32	32						
	# Students withdrew, dropped, etc.	0	1						

Students in PhD Degree, by Cohorts Entering Between 2014-2015 and 2021-2022									
*Maximum T	ime to Graduate: 8 years								
	Cohort of Students	2014- 2015	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
	# Students graduated	0	0						
	Cumulative graduation rate	0%	0%						
	# Students continuing at beginning of this school year (or # entering for newest cohort)	32	31	38					
2016-2017	# Students withdrew, dropped, etc.	1	1	0					
	# Students graduated	1	1	0					
	Cumulative graduation rate	3%	3%	0%					
2017-2018	# Students continuing at beginning of this school year (or # entering for newest cohort)	30	29	38	39				
	# Students withdrew, dropped, etc.	1	0	0	1				
	# Students graduated	4	1	0	0				
	Cumulative graduation rate	15%	6%	0%	0%				
	# Students continuing at beginning of this school year (or # entering for newest cohort)	25	28	38	38	38			
2018-2019	# Students withdrew, dropped, etc.	0	0	1	0	0			
	# Students graduated	5	2	1	0	0			
	Cumulative graduation rate	30%	13%	3%	0%	0%			
	# Students continuing at beginning of this school year (or # entering for newest cohort)	20	26	36	38	38	41		
2019-2020	# Students withdrew, dropped, etc.	2	1	1	0	0	1		
	# Students graduated	6	9	6	0	0	0		
	Cumulative graduation rate	45%	41%	18%	0%	0%	0%		
2020-2021	# Students continuing at beginning of this school year (or # entering for newest cohort)	12	16	29	38	38	40	33	

Students in PhD Degree, by Cohorts Entering Between 2014-2015 and 2021-2022									
*Maximum T	ime to Graduate: 8 years								
	Cohort of Students	2014- 2015	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
	# Students withdrew, dropped, etc.	0	0	0	0	0	0	0	
	# Students graduated	6	6	12	1	0	0	0	
	Cumulative graduation rate	64%	59%	50%	3%	0%	0%	0%	
	# Students continuing at beginning of this school year (or # entering for newest cohort)	6	10	17	37	38	40	33	39
2021-2022	# Students withdrew, dropped, etc.	1	1	0	0	3	0	0	0
	# Students graduated	4	6	4	7	1	0	0	0
	Cumulative graduation rate	79%	78%	61%	21%	3%	0%	0%	0%

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

Template B2-2: Doctoral Student Data for year 2021-2022

	Doctoral Concentration: Biostatistics	Doctoral Concentration: Environmental Health Sciences	Doctoral Concentration: Epidemiology	Doctoral Concentration: Health Services Research, Policy & Administration
# newly admitted in 2021-2022	14	3	13	7
# currently enrolled (total) in 2021-2022	52	39	64	38
# completed coursework during 2020-2021	11	15	18	7
# in candidacy status (cumulative) during 2020-2021	11	11	19	19
# graduated in 2020-2021	8	1	9	7

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

The graduation rates for MPH, MS, and PhD students all meet the criteria of 70% or greater for master's degrees and 60% or greater for doctoral degrees.

All requirements for master's degrees must be completed, and the degree awarded, within 5 years.

All requirements for a doctoral degree must be completed, and the degree awarded, within 8 years.

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

Strengths

- Our graduation rates meet the CEPH minimum criteria.
- SPH continually reviews data concerning graduation rates to better understand the challenges and barriers to those students not able to complete their degrees within the maximum time to graduation framework.

Weaknesses

• None.

B3. Post-Graduation Outcomes

For each public health degree offered (e.g. BS, MPH, MS, PhD, DrPH), the school collects and analyzes data on graduates' employment or enrollment in further education post-graduation. The school achieves rates of 80% or greater employment or enrollment in further education within the defined time period for each degree.

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

Post-Graduation Outcomes (MPH)	2018 (Total N=265)	2019 (Total N=276)	2020 (Total N=390)	2021 (Total N=361)
Employed	212 (80.0%)	240 (87.0%)	300 (77.0%)	282 (78.1%)
Continuing education/training (not employed)	14 (5.3%)	8 (2.9%)	20 (5.1%)	17 (4.7%)
Not seeking employment or not seeking additional education by choice	0 (0%)	0 (0%)	4 (1.0%)	3 (0.8%)
Actively seeking employment or enrollment in further education	34 (12.8%)	26 (9.4%)	66 (16.9%)	50 (13.9%)
Unknown	5 (1.9%)	2 (0.7%)	0 (0.0%)	9 (2.5%)
Total graduates (known + unknown)	265 (100%)	276 (100%)	390 (100%)	361 (100%)

Table B3-1

Post-Graduation Outcomes (MS)	2018 (Total N=31)	2019 (Total N=33)	2020 (Total N=25)	2021 (Total N=72)
Employed	25 (80.6%)	28 (85.0%)	19 (76.0%)	38 (52.8%)
Continuing education/training (not employed)	1 (3.2%)	0 (0.0%)	3 (12.0%)	6 (8.3%)
Not seeking employment or not seeking additional education by choice	1 (3.2%)	0 (0.0%)	1 (4.0%)	0 (0.0%)

Actively seeking employment or enrollment in further education	2 (6.5%)	3 (9.0%)	1 (4.0%)	5 (6.9%)
Unknown	2 (6.5%)	2 (6.0%)	1 (4.0%)	22 (30.6%)
Total graduates (known + unknown)	31 (100%)	33 (100%)	25 (100%)	72 (98.6%)

Post-Graduation Outcomes (PhD)	2018 (Total N=25)	2019 (Total N=19)	2020 (Total N=29)	2021 (Total N=53)
Employed	23 (92.0%)	18 (95.0%)	29 (100.0%)	40 (75.5%)
Continuing education/training (not employed)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (3.8%)
Not seeking employment or not seeking additional education by choice	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.9%)
Actively seeking employment or enrollment in further education	0 (0.0%)	1 (5.0%)	0 (0.0%)	0 (0.0%)
Unknown	2 (8.0%)	0 (0.0%)	0 (0.0%)	10 (18.9%)
Total graduates (known + unknown)	25 (100%)	19 (100%)	29 (100%)	53 (100%)

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.

We collected the above data through the SPH Graduate Outcomes Survey. Until 2019, we distributed this non-mandatory, self-reported survey to students in March of their graduating year. In the event of non-response, we re-submitted the survey every three weeks and up to three years post-graduation. We categorized students who did not respond within that time frame as "Unknown." Students who did complete the survey (including those who noted they were still seeking employment or further education) received no follow-up survey or other related communication. This resulted in lower response rates and less reliable data outcomes. In January 2020, we rolled out a new Graduate Outcomes Survey that required completion for degree clearance for MPH students, and that included new questions to strengthen our data output.

It is important to remember that these data are post-graduate outcomes collected up to 12 months after graduation; thus the data in the 2021 column will continue to be updated and monitored as 2022 moves forward. The 2021 employment rate already meets the minimum 80% CEPH criteria for MPH graduates and the response rate is also the highest the SPH has ever had for this survey.

Note: Because students graduate from our programs every month, we collect and report data based on the calendar year rather than academic year. For example, students who graduated between January 1, 2019 – December 31, 2019 are considered the class of 2019, and we include their data above.

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

In early 2019, the Career & Professional Development Center led the aforementioned process to strengthen the SPH Graduate Outcomes Survey. The improved survey added questions to enhance the data collected (i.e. Employer Name, Employer Location, Domestic vs. International Student Status, and Engagement Interests within Alumni Relations), eliminated unnecessary questions, and tied completion of the survey to degree clearance. As a result, we hope to improve our overall response rates as well as fortify our public reporting (e.g. via our website and other external communications). Lastly, the center now receives notice when students are still seeking employment or further education, and follows up directly (based on students' preferred method of communication) to offer job search assistance and resources. Already, the response rate to our survey has greatly improved among students who graduated in 2020. Further, placement rates upon graduation in this group are among the highest in the center's history (77% for MPH graduates).

B4. Alumni Perceptions of Curricular Effectiveness

For each public health degree offered, the school collects information on alumni perceptions of their own success in achieving defined competencies and of their ability to apply these competencies in their post-graduation placements.

The school defines qualitative and/or quantitative methods designed to maximize response rates and provide useful information. Data from recent graduates within the last five years are typically most useful, as distal graduates may not have completed the curriculum that is currently offered.

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

<u>A. Career Trends Survey.</u> In spring 2021, SPH sent a career trends survey to all SPH alumni more than 12 months post-graduation (approximately 10,000 alumni, of which 2000 responded). Alumni rated their perceptions about the foundational competencies as well as other components of their education and training. Below, we outline key outcomes from assessment of the foundational competencies. We offer a more detailed summary of the survey methods and results (including the response to a wider variety of questions) in the ERF.

My SPH education provided me with the specific skills I needed for my first job.							
Strongly Disagree Disagree Agree (%) Strongly Agree (%)							
4%	9%	51%	36%				

For each domain, please reflect how well your education did or did not prepare you to work in a professional context.							
	1 (%)	2 (%)	3 (%)	4 (%)			
Evidence-based approaches to public health	1	4	37	58			
Public health and health care systems	2	9	46	42			
Planning and management to promote health	2	10	50	38			
Policy in public health	3	17	52	28			
Leadership	3	14	45	38			
Communication	2	9	41	48			
Interprofessional practice	2	8	43	47			
		_					

Systems thinking17411 = Very Unprepared; 2 = Somewhat Unprepared; 3 = Somewhat Prepared; 4 = Very Prepared

<u>B. Alumni focus groups</u>. In spring 2021, SPH conducted focus groups of recent alumni, most of whom graduated in 2020. The alumni represented a variety of degree programs and work in a variety of sectors, including government, industry, non-profit, and academia. The results of the focus groups are consistent with the Career Trends Survey in the following areas. First, alumni felt most prepared for evidence-based approaches to public health. They would have liked more preparation in communication, leadership, and policy in public health. One notable theme was that although the alumni felt that their education provided necessary skills and was well rounded, their coursework was more grounded in the ideal rather than in the complexities and uncertainties of the issues they needed to address in the workplace. Accordingly, the MPH alumni found the Applied Practice and Integrative Learning Experience to be particularly useful for entry into the workforce. We present a more detailed summary of the focus group methods and results in the ERF.

Altogether, the surveys and focus groups together provide very useful data for continuing to improve our curriculum. For example, it is very useful to compare the results of the Graduate Outcomes Survey, described below, and the Career Trends Survey. Whereas the Graduate Outcomes Survey addresses student perception of competency completion as they are about to graduate and enter the workforce, the Career Trends Survey addresses the perception of curricular effectiveness and their application of the competencies after the graduates have entered workforce and have real-world experience. The results of the two surveys are remarkable consistent. In both cases over 80% or more of the respondents agree/strongly agree that they achieved the competencies through their SPH education. For example, in both surveys, at least 95% of respondents agree/strongly agree that they achieved the competency in evidence-based approaches to public health. In both surveys, 81-83% of agree/strongly agree that they achieves persist through employment. The surveys are also very useful for looking at trends. For example, we have clear strength in evidence-based approaches to public health. but we may want to evaluate how to better prepare our students in the area of policy in public health.

Although, the surveys have the advantage of reaching a large number of students and alumni, they necessarily provide information in broad strokes. The usefulness of the data also depends on response rate. This can be a particular challenge when we want to gather data on specific programs.

Although focus groups reach smaller number of alumni than surveys, in contrast to the surveys, they provide an excellent opportunity to dig deeper into questions and issues regarding curricular effectiveness and the application of competencies in the workplace, and for us to obtain more nuanced answers that we can use to help use to evaluate and modify our curriculum.

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

Career Trends Survey

The Career Trends Survey was conducted January - March 2021 through a mixed fielding approach. SPH alumni at least one-year post-graduation and for which we had domestic US contact information (mobile, email, postal address) were included in the invite (n=9,713). Alumni were invited to participate through a combination of 1) a web-based survey via a mobile, email, or postcard invites or 2) full paper surveys. In total, 1,967 alumni participated (20% response rate). Among alumni between two- and five-years post-graduation (the analytic sample for this section), the total response was 354/1,439 (24.6% response rate). The web-based survey (and form-equivalent paper survey) encompassed a number of areas related job trajectory, perception of education, salary, debt, and demographics. The survey was conducted electronically via Qualtrics.

Focus Groups of Recent Alumni

Two focus groups of recent alumni were conducted in March 2021 by a professional facilitator. The focus group questions included how well the alumni were prepared for the workforce when they graduated from the SPH, in which competency domain they were best and least prepared, perceived gaps in their education, and examples of times when they used the competency domains in their work. Full results from these focus groups can be found in the Electronic Resource File, Criterion B folder, B4 subfolder.

Graduate Outcomes Survey

The Graduate Outcomes survey is conducted continuously among students applying for graduation. Students are asked questions related to their education and post-graduation employment plans. Among graduating students that indicate they are not employed but seeking employment, a monthly check-in survey is sent until a student is one-year post-graduation or indicates they have a different employment outcome. The survey is conducted electronically via Qualtrics. Full results of this most recent survey can be found in the Electronic Resource File, Criterion B folder, B4.2 subfolder.

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

Strengths

- We recently launched a comprehensive survey to assess alumni perceptions of curricular effectiveness.
- A majority of SPH alumni (80% or more) agree/strongly agree that SPH education provided them with the specific skills they needed for their first job, and that for each of the major competency domains, their education prepared them to work in a professional context.
- The results of the Career Trends Survey align with the Graduate Outcomes Survey, which indicates that the education SPH provides remains relevant and applicable post-graduation.

Weaknesses

- We recognize we would benefit from increasing the engagement of our alumni in the assessment and continuous improvement of our educational programs through focus groups and other methods, in addition to surveys.
- The usefulness of the survey data depends on response rate. This can be a particular challenge when we want to gather data on specific programs.

B5. Defining Evaluation Practices

The school defines appropriate evaluation methods and measures that allow the school to determine its effectiveness in advancing its mission and goals. The evaluation plan is ongoing, systematic and well-documented. The chosen evaluation methods and measures must track the school's progress in 1) advancing the field of public health (addressing instruction, scholarship and service) and 2) promoting student success.

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.

Evaluation Measures	Identify data source(s) and describe how raw data are analyzed and presented for decision making*	Responsibility for Review						
Goal 1 Educa	Goal 1 Education: Provide students with the knowledge, skills, and experience to become leaders in public health practice and research.							
<u>Measure</u> : Preceptor and student evaluation of the Applied Practice Experience.	When a student completes the Applied Practice Experience, both the student and preceptor log into an electronic module and complete an evaluation of the experience. Both the preceptor and the student assess the ability of the student to apply the designated competencies during the Applied Practice Experience, and whether the products met the purpose (i.e., demonstrated application of specific competencies and benefited the worksite). The preceptor also comments on the student's special strengths and areas to be strengthened, including technical competence, and professional practice. The faculty advisor and the applied practice coordinator can access the data in the learning module. The applied practice coordinator also compiles and shares data upon request.	Dean The faculty advisor reviews preceptor and student evaluations. The Applied Practice Coordinator reviews student evaluations. Students can review past student evaluations.						

Template B5-1

<u>Measure</u> : Employment at time of graduation.	Students complete a "graduate outcomes survey" during their last semester. The survey records if upon graduation students are: 1) employed; 2) continuing education/training (not employed); 3) not seeking employment or not seeking additional education by choice; or 4) actively seeking employment or enrollment in further education. The data are presented in an annual report prepared by the Career & Professional Development Center.	Dean Program directors & program coordinators Student services staff				
	The "career trends survey," initiated in spring 2021, is sent to all SPH alumni that are	Dean & associate deans Division heads Program directors & program coordinators				
<u>Measure</u> : Alumni perception of curricular effectiveness	greater than 12 months post-graduation. The career trends survey will be sent out every five years. Alumni are asked to rate their perception of how their SPH education prepared them with the competencies needed for employment. Reviewers are given access to a summary report and the raw data, which is available in a spreadsheet.	Student services staff Alumni relations staff				
		Please note that program directors and representatives from program coordinators and student services staff are members of the SPH educational policy committee.				
<u>Measure</u> : Employer assessment of	Employer feedback focus groups initiated in summer 2021.	Associate dean for education and student				
preparation of SPH graduates for the workplace.	Staff from the Career & Professional Development Center facilitate the data collection and compile a report.	Career & professional development staff				
Goal 2 Research: Conduct, translate, and disseminate research to shape effective public health solutions, policies, and practices in order to reduce health inequities.						
<u>Measure</u> : Faculty ranking of the most important research areas for investment.	This information is collected through faculty retreats on strategic directions through both surveys and discussions. The data are presented in summary of notes available on the SPH website.	SPH leadership team (dean, associate deans, division heads, CFO, chief of staff, chief development officer & director of advancement, director of communications) Also shared broadly with SPH faculty and staff				

		Division heads
<u>Measure</u> : Number of peer-reviewed articles published by faculty.	SPH faculty; appointment, tenure and promotion committee; tenured faculty who vote on tenure and promotion	
		Dean
<u>Measure</u> : Total number of		Associate dean for research
awards and total research funding from grants and	These data are prepared by the CFO from data available from University payroll (Peoplesoft system) and the Office of the Vice President for Research databases.	Associate dean for faculty affairs
contracts.		Division heads
		SPH community
		Dean
	These data are prepared by the CFO from data available from University payroll (Peoplesoft system) and the Office of the Vice President for Research databases.	Associate dean for research
Measure: Number of		Associate dean for faculty affairs
proposals submitted, and number of proposals		Division heads
awarded.		SPH faculty; appointment, tenure and promotion committee; tenured faculty who vote on tenure and promotion
		SPH community
Goal 3 Comn	nunity Engagement: Engage and collaborate with partners to advance learning, practice,	and scholarship in public health.
		Dean
<u>Measure</u> : Number of Applied Practice Experiences	Data are generated from the electronic learning module and prepared by the Applied Practice Coordinator.	Office of development relations
		SPH community
<u>Measure</u> : Number of external partners involved in the Driven to Discover (D2D) Research Facility	D2D manager collects data and prepares an annual report.	D2D co-directors

at the Minnesota State Fair						
<u>Measure</u> : Number of fairgoers who visit the D2D Research Facility at the Minnesota State Fair and number who agree to participate in a research project.	D2D manager collects data and prepares an annual report.	D2D co-directors				
<u>Measure</u> : Number of publications and student theses resulting from D2D Research Facility activities.	D2D manager collects data and prepares an annual report.	D2D co-directors				
Goal 4 Continuing Educa	tion: Provide continuing education to professionals and community leaders in evidenced- being.	based practices that improve health and well-				
		Advisory boards				
<u>Measure</u> : Number of participants in continuing education courses and training programs.	Data are collected from enrollment data bases and by staff or directors for the different programs that offer continuing education (see sections F3 and F4). Data are reported to funding agencies and advisory boards, for example as interim and final reports.	Steering committees Program directors Funding agencies & project officers				
		Advisory boards				
<u>Measure</u> : Number of continuing education courses and training events.	<u>Measure</u> : Number of continuing education duration education education courses and training education that offer continuing education (see sections F3 and F4). Data are reported to funding agencies and advisory boards, for example as interim and final reports.					
		Funding agencies & project officers				
Goal 5 Diversity, Equity, and Inclusion: Advance diversity, equity, inclusion, justice and antiracism in our education, research, and community engagement.						
<u>Measure</u> : Climate survey results on strengths and areas for growth for SPH.	Climate survey results are collected and reported by the Director of Diversity, Equity and Inclusion. Presented in an SPH Community Forum.	SPH leadership team (dean, associate deans, division heads, CFO, chief of staff, chief development officer & director of advancement, director of communications)				

		Faculty, staff & students SPH community
<u>Measure</u> : Faculty and staff response to Employee Engagement Survey questions related to diversity equity and inclusion.	The Employee Engagement Survey is a University-wide opportunity for faculty and staff to provide confidential feedback on their experience working at the University of Minnesota. It is administered by University of Minnesota Office of Human Resources. They compile the results and make them available through a portal. SPH human	SPH leadership team (dean, associate deans, division heads, CFO, chief of staff, chief development officer & director of advancement, director of communications)
	resources staff also compile the results and make them available on the SPH intranet.	SPH community

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.

As shown in table above, SPH uses several different methods of evaluation to guide discussions on progress toward goals regarding education, research, community engagement, continuing education, and diversity, equity, and inclusion. These goals all focus on advancing the field of public health and promoting student success. Collectively, they address instruction, scholarship, and service.

Evaluation takes place at many levels, including 1) programs, centers, and training grants; 2) divisions; and 3) SPH overall. Depending on the level at which evaluation takes place, data may be evaluated by faculty advisors, directors of programs, centers, or training grants; funding agencies; advisory boards and steering committees; lead staff of student services programs and alumni programs; division and school-wide committees; and senior administrative leadership, such as the dean, associate deans, and division heads. Data summaries presented at school-wide meetings are also made available to the SPH community through documents on the SPH website.

Some of the evaluation measures shown in Template B5-1 are reviewed annually by the dean for reporting during the compact/budget development process with the provost. This report lists SPH goals that align with UMN commitments, includes measures and status of goals, and is shared with the provost and other senior UMN officials to be used during high level meetings regarding the compact/budget development. A brief summary of the FY22 compact report and select portions relevant to the evaluation measures listed in Template B5-1 can be found in the Electronic Resource File, Criterion B folder, B5.3 subfolder.

We use specific measures for evaluation in a dynamic way and may modify the measures as different types of assessments become available. For example, as we work to develop the metrics for assessing the progress of our strategic plan for antiracism, we will likely expand and modify the measures for assessing progress toward achieving our diversity, equity, and inclusion goal. We are also developing a dashboard that integrates data from several University databases, allowing us to compile different types of reports to view the data comprehensively.

Goal 1 Education: *Provide students with the knowledge, skills, and experience to become leaders in public health practice and research.* This goal addresses instruction and student success. We use four different measures to evaluate progress toward this goal. One measure is the

preceptor and student evaluation of the Applied Practice Experience. Faculty advisors review the preceptor and student evaluation of the Applied Practice Experience because preceptors directly observe students as they apply competencies in a work site, allowing the faculty advisor to assess the ability of the students to apply competencies outside of the classroom. Students review the student evaluations to help them choose a site where they are likely to have a meaningful Applied Practice Experience. The Applied Practice Experience coordinator reviews the evaluations of the Applied Practice Experiences to determine which worksites most benefit the professional development of students.

The Applied Practice data are reviewed annually by the dean for reporting during the compact process. These data are included in the SPH measure of *UMN Commitment I Student Success* (see page 3 of the FY22 compact summary document, found in the Electronic Resource File, Criterion B folder, B5.3 subfolder). The Applied Practice Coordinator also compiles and shares data upon request with programs for their own discussions. SPH recently created a mechanism for generating reports, which will make it easier to give greater access to Applied Practice data, including competencies, how students find their opportunities, and when students do not recommend a preceptor.

The other three measures are employment at time of graduation and alumni and employer assessment of preparation for the workplace. Employment at the time of graduation indicates the strength of student preparation for entry into the workforce, which is the first step toward serving as a community leader and professional. Alumni perception of curricular effectiveness indicates the career trajectory of students and provides valuable feedback on how they view the strengths of their SPH educational programs, as well as growth opportunities for our educational programs. Employer assessments provide valuable feedback from a different perspective on how employers view the strengths of SPH educational programs and as well as their feedback growth opportunities for SPH educational programs. Collectively, these measures guide evaluation of our educational programs and inform decisions about where we need to modify our programs to best prepare students for practice and research. Furthermore, these data indicate our progress toward our mission to improve the health and well-being of populations and communities through excellence in education.

The data on employment, alumni perception of curricular effectiveness, and employer assessment on the preparation of SPH graduates for the workplace are reviewed annually. The results of the graduate outcomes survey are reviewed annually by the dean for reporting during the compact process. These data are included in the SPH measure of *UMN Commitment I Student Success* (see page 3 of the FY22 compact summary document, found in the Electronic Resource File, Criterion B folder, B5.3 subfolder). The results of the graduate outcomes survey are also made available on a dashboard. Program coordinators, program directors, and student services staff all have access to the dashboard. The percentage of students employed within 12 months of graduation is also reported on the website for the career services team. Data from the career trends survey were prepared by alumni relations staff and presented at a meeting to which the following stakeholders were invited: dean, associate deans, division heads, program directors and student services staff. Alumni relations staff also met with program coordinators, on request, to help orient them to the data.

Goal 2 Research: *Conduct, translate, and disseminate research to shape effective public health solutions, policies, and practices in order to reduce health inequities.* This goal addresses advancing the field of public health and scholarship. We use four different measures to help evaluate progress. First, we hold faculty retreats during which faculty rank (via survey and discussion) areas for investment. Faculty make valuable contributions to identifying important research areas in service of our goal because of their deep immersion in public health scholarship and their awareness of current and emerging issues through participation in professional and community networks. This process of faculty input falls under the umbrella of an ongoing discussion, referred to as SPH2030, involving regular review of critical areas of public health challenges by the faculty and SPH leadership (information on SPH 2030 can be found in the Electronic Resource File, Criterion B folder, B5.3 subfolder, within the Goal 2 folder). As a second measure for our research goal, the number of peer-reviewed articles published by faculty reflects dissemination of research

and productivity. We closely review this factor, including the number of publications that address health inequities, for annual merit reviews and the tenure and promotion process. Third, the total number of awards and total research funding from grants and contracts, together with the number of proposals submitted, indicate research productivity. Finally, individual grants and contracts inform annual merit reviews and the tenure and promotion process. Collectively, these measures not only guide evaluation of our progress in advancing public health and scholarship, but also inform our decisions about research areas for investment and how to support productivity.

The measures of the research goal are reviewed annually by the dean and the division heads. The data on proposals and awards are reported during the compact process (see page 2 of the FY22 compact summary document in the Electronic Resource File, Criterion B folder, B5.3 subfolder). Please note that the summary of the report mentions that applications for research funding increased in the area of health inequities in underserved populations. These data are also reported in the SPH briefing book and during the annual state of the school address (the SPH briefing book and slides from the SPH state of the school address can be found in the Electronic Resource File, Criterion B folder, B5.3 subfolder). Division heads review the research data annually to guide hiring decisions and to evaluate the progress of individual faculty members for merit review, to monitor progress for tenure and promotion, and to develop mentoring plans.

Goal 3 Community Engagement: Engage and collaborate with partners to advance learning, practice, and scholarship in public health. This goal addresses advancing the field of public health and promoting student success. Our two main measures of community engagement are the number of Applied Practice Experiences and three metrics associated with one of our major venues for community engagement, the Driven to Discover (D2D) Research Facility at the Minnesota State Fair, a facility which is led and staffed by SPH. More than two million people visit the Minnesota State Fair each year from across the state, making D2D a great place for SPH to connect with the broad community and engage them in exciting, innovative research projects from a wide variety of disciplines. These measures indicate the reach of our community engagement to public health practice partners, University partners, and the broader community. The Applied Practice Experience represents a major mechanism for collaborating with partners to advance learning and practice. We collect data not only on the number of practice experiences, but also the sites and locations. These data reveal the breadth of our collaboration with partners to advance the learning and practice in public health, and guide decisions about how to expand practice experiences into different areas. Members of the community who visit D2D gain enthusiasm for scientific inquiry and gain awareness of the importance of research through one-on-one interactions with University student and faculty investigators. The number of partners involved in D2D indicate our collaboration with partners outside of SPH and help guide decisions about seeking out additional partners for this venue. The number of people who agree to participate in a research project indicate the extent of public interest in our research. The number of publications and student theses resulting from D2D research facility indicates how collaboration with partners contributes to scholarship and learning. Collectively, these meas

The number of Applied Practice Experiences are reviewed annually by the dean for reporting during the annual state of the school address (the slides for the SPH state of the school annual address can be found in the Electronic Resource File, Criterion B folder, B5.3 subfolder). The Applied Practice data are also reviewed annually by staff from the SPH office of development and alumni who monitor alumni participation as practitioners. The data on Driven to Discover (D2D) activities are reviewed annually by the D2D co-directors (the annual D2D report can be found in the Electronic Resource File, Criterion B folder, B5.3 subfolder, within the Goal 3 folder). The co-directors review the data to help in planning future activities, including determining the need to increase awareness of D2D to broaden the number of partners, which can help increase community participation and research progress. For example, D2D plans to expand its reach by participating in county fairs as well as the state fair.

Goal 4 Continuing Education: Provide continuing education to professionals and community leaders in evidenced-based practices that improve health and well-being. This goal addresses advancing the field of public health. Our two main measures of progress are: 1) the number of

participants in continuing education courses and training programs; and 2) the number of continuing education courses and training events. As described in detail in sections F3 and F4, SPH has several programs that assess professional development needs and then implement courses and training events based on these assessments. These programs use robust tracking systems. Measures are typically reported to the directors of the programs, project officers at funding agencies, and other stakeholders through reports to advisory and steering committees. These measures help guide decisions about how to best address the needs for professional development and continuing education.

The measures for continuing education are reviewed and reported according to the requirements of the funding agencies in addition to reports to advisory and steering committees for each major initiative (please see Sections F3 and F4 as well the Electronic Resource File, Criterion F folder, F3.2 subfolder.). At this time, the school does not have a central mechanism for reviewing and discussing continuing education data across all units.

Goal 5 Diversity, Equity, and Inclusion: Advance diversity, equity, inclusion, justice, and antiracism in our education, research, and community engagement. This goal addresses advancing the field of public health and promoting student success. We have two measures for evaluating our progress toward this goal. First, our climate survey that takes the "cultural temperature" of SPH around issues of diversity, equity, and inclusion in order to identify strengths and opportunities for growth and provide recommendations to help us reach our goal. Second, the Employee Engagement Survey, administered by the University, assesses staff and faculty perceptions on a variety of issues, including diversity, equity, and inclusion. These measures present a baseline for evaluating our progress toward our goal and University goals regarding "Community and Belonging," and help guide decisions about priorities for growth. As mentioned above, our work continues toward developing more refined and varied metrics for this goal.

The measures for diversity, equity, and inclusion are reviewed annually by the dean for reporting during the compact process. These data are included in the SPH measure of *UMN Commitment 4 Community & Belonging* (see pages 3 and 4 of the FY22 compact summary document, in the Electronic Resource File, Criterion B folder, B5.3 subfolder). These data are also reported at school-wide meetings including a community forum (slides from the community forum can be found in the Electronic Resource File, Criterion B folder, within the Goal 5 folder). The results are also reported and discussed at meetings of SPH leadership.

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.

We provide sufficient evidence of implementation of the SPH evaluation plan including the following: documents for the FY22 compact process, annual and interim reports, the SPH briefing book, slides from the state of the school address, sections of the policy addressing appointment, promotion, and tenure, screen shots of the Applied Practice Experience learning module, and notes from faculty retreats and focus groups. In particular, the SPH briefing book and state of the school address provide concise summaries of progress and impact. Please see the Electronic Resource File, Criterion B folder, B5.3 subfolder.

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

Strengths

• SPH uses several sources of data to evaluate progress toward our goals and inform decision-making. We have aligned our data collection and review process with our goals and priorities.

Weaknesses

• Data collection, evaluation, and dissemination has often been conducted at the level of specific programs or units within the SPH. In response to that, we are developing a centralized, coordinated process for collecting, evaluating, and disseminating data from all sources within the SPH and the University. Our first step toward this goal is the development of a mission-based dashboard to display and disseminate a variety of different reports to aid evaluation and decision-making.

B6. Use of Evaluation Data

The school engages in regular, substantive review of all evaluation findings, as well as strategic discussions about the implications of evaluation findings.

The school implements an explicit process for translating evaluation findings into programmatic plans and changes and provides evidence of changes implemented based on evaluation findings.

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.

Example 1: 2021 Launch of the implementation of the Strategic Plan for Antiracism.

The Director of Diversity, Equity, and Inclusion (DEI) recognized the need for an antiracism strategic plan based on data from the student engagement survey. This data indicated that students of color experienced challenges associated with their identities, and that using the word "diverse" without substantial action to create a welcoming and sensitive climate created great frustration among our priority populations. As a result, SPH hired the consulting firm Strategic Diversity Initiatives (SDI) to facilitate the strategic planning process. Development of the strategic plan started in May 2020. SDI collaborated with the DEI director to lead the process, which involved fully engaging with stakeholders from across the school community and clarifying important goals for the school. As part of the process additional data were collected through the first of its kind SPH climate assessment for students, staff and faculty. SDI facilitated all committee meetings, helped edit all major documents, and offered feedback along the way to the DEI director. The development of the antiracism strategic plan was conducted by a 17-member committee, which included representation from staff, students, and faculty. The major change was the implementation of the Strategic Plan for Antiracism in July 2021:

https://www.sph.umn.edu/about/diversity-inclusion/strategy-planning/

Summary

- Specific evaluation finding: results of the student engagement survey, supported by the climate survey, indicated the need for a strategic plan for antiracism.
- *Groups or individuals responsible for determining the planned change:* Director of Diversity, Equity and Inclusion in consultation with Strategic Diversity Initiatives; Dean
- The change: Implementation of a school-wide Strategic Plan for Antiracism

Example 2: 2021 Launch of the Blue Cross Endowed Professorship of Health and Racial Equity and the Center for Antiracism Research for Health Equity.

Results from surveys and discussions conducted at faculty retreats highlighted the need for strongly prioritizing health equity in faculty research, which ultimately led to the launching of the new Center for Antiracism Research for Health Equity. Likewise, the SPH Campaign Council identified diversity, equity and inclusion as a funding priority. Engagement with a community partner, Blue Cross and Blue Shield of Minnesota, indicated an alignment with these SPH priorities and with Blue Cross goals. Importantly, we identified widespread recognition of the leadership of Rachel Hardeman, Associate Professor in Health Policy and Management, in the area of antiracism, as indicated by her research funding, publications, and community engagement. We initiated a major programmatic shift to improve knowledge about antiracism. Blue Cross and Blue Shield of Minnesota made a generous gift of \$5 million to launch and help sustain a new center focused on racial health disparities and improve public health. Blue Cross also changed the focus of professorship they endow from the Blue Cross Professorship of Health Economics to the Blue Cross Endowed Professor of Health and Racial Equity. We named Rachel Hardeman the Blue Cross Endowed Professor of Health and Racial Equity; she created the vision for the center and will serve as its founding director. The goals of the Center are as follows: 1) develop antiracist research; 2) foster

authentic community engagement; 3) develop education and training; 4) change the narrative about race and racism; and 5) serve as a trusted resource.

Summary

- Specific evaluation finding: Results of faculty retreat survey and discussions identified heath equity as a top priority for research investment. Dr. Hardeman's record of research, scholarship, and community engagement provided evidence of the need for a center focused on antiracism and the expertise of Dr. Hardeman to lead the center.
- Groups or individuals responsible for determining the planned change: Division Head of Health Policy and Management, Timothy Beebe, Dean, Rachel Hardeman, Associate Professor and Blue Cross Endowed Professor of Health and Racial Equity; SPH Campaign Council, Chief Development Officer & Director of Advancement.
- *The change*: Launch of the Center for Antiracism Research for Health Equity; change in the focus a professorship endowed by Blue Cross from the Blue Cross Professorship of Health Economics to the Blue Cross Endowed Professor of Health and Racial Equity.
- 2) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.

Strengths

 SPH holds a strong record of responding to evaluation measures and input from community partners to make critical programmatic shifts. Our responsiveness and agility in adapting to input benefits SPH directly and the broader community through research, community engagement, education, and training.

Weaknesses

• We are strengthening internal and external communications to improve dissemination of significant movement toward goal achievement and changes we have made to our school based on evaluation data and other forms of input.

C1. Fiscal Resources

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

- 1) Describe the school's budget processes, including all sources of funding. This description 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 University allows each school some discretion in allocating and managing financial resources (in accordance with University-wide policies and procedures). In the School of Public Health, most faculty cover a large portion of their effort through extramural sources and teaching—and, if not, the school/division covers the gap. SPH also provides a start-up funding package to help cover salaries for all newly hired tenure and tenure-track faculty.

Salaries for contract faculty are covered through extramural funding and/or tuition funding based on the specifics of each contract.

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.

Generally, the chief financial officer prepares a five-year plan/ROI (return on investment) statement showing funding sources for each requested position. Funding sources include the SPH salary coverage start-up packages mentioned in 1a along with start-up funding from the division for research, equipment, development, and teaching. Depending on the nature of the position, funding sources may also be external to SPH (for example, the provost's office or other schools).

c. Describe how the school funds the following:

a. Operational costs (schools define "operational" in their own contexts; definition must be included in response)

SPH covers operational costs with funding sources shown in template C1-1, including tuition, indirect cost recovery, gifts and endowment interest, and others (external and internal services organizations). Tuition and indirect cost funds are allocated (in general, 60% division, 40% school) to each division based on estimated revenue for each budget year. These funds are used by the divisions to cover faculty, staff, and student salaries as well as other operating costs. The school portion covers operational expenses of the dean's office, student services, recruitment, diversity and inclusion, career services, communications and marketing, financial/administrative support, grant support, and student support.

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

Gifts, general operating funds, and endowments support student scholarships, internships, graduate assistantships (which cover tuition, stipend, and health insurance), student senate, student collaboration spaces, global student exchanges, and student computer labs. The school provides support for travel expenses related to presentation at national events such as American Public Health Association. SPH has memorandums of agreement with three international programs, two in India and one in Mexico. The school uses operating funds to support student engagement in these global health activities, with up to six SPH scholarships supporting students attending the Winter School at Nitte University in Mangalore, India

and up to three scholarships for students attending the National School of Public Health in Mexico. A private donor supports up to three more students annually in attending an applied public health experience in Kolkata, India.

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

The school provides a start-up funding package for all newly hired tenure and tenure-track faculty. These packages can be used by the divisions for salary support and/or faculty development. Depending on rank, the packages range from:

- One year of funding for a full professor that includes 20% salary/fringe benefits coverage
- Two years of funding for an associate professor that includes 40% salary/fringe benefits coverage in year one and 20% salary/fringe benefits coverage in year two
- Three years of funding for an assistant professor that includes 60% salary/fringe benefits coverage for year one, 40% salary/fringe benefits coverage for year two, and 20% salary/fringe benefits coverage for year three

In addition, each division is responsible for allocating startup funds for each new faculty. This funding is intended to cover costs related to research purposes, graduate students, travel to professional conferences, and development.

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's annual "compact process" is central to SPH's budget and resource allocation process, which begins with a priority assessment. The executive team (dean, associate deans, division heads, chief financial and administrative officer, and the chief of staff) identifies budget priorities and requests additional funds from the provost to support new initiatives in the school compact. Executive team members seek faculty and staff input in identifying the budget priorities. The compact also includes a complete budget analysis, a brief statement of achievements during the past year, goals and objectives for the coming year, performance measures, and related budget requests.

The executive team submits the compact to the provost for review and discussion at SPH's annual compact meeting, during which the provost and other central administrators discuss the compact, potential forthcoming funding, financial reports, and other deliverables in the coming year. The approved final compact serves as an agreement between the dean and the provost.

The University operates under a responsibility-centered management system. SPH's general operating resources draw mainly from tuition income, indirect cost recovery funds (ICR) generated by sponsored projects, and state funds (including a State of Minnesota special appropriation). The school has responded to the ever-shifting state and federal funding by vigorously pursuing and securing grant funding and research contracts, and by diversifying and growing its educational offerings.

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.

The University allocates 100% of SPH tuition generated during the year directly to SPH.

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 University allocates 100% of SPH indirect costs generated during the year to SPH.

2) 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.

Source of Funds					
	2017	2018	2019	2020	2021
Tuition & Fees	\$22,477,334	\$22,727,152	\$23,296,942	\$22,628,746	\$23,199,300
State Appropriation	\$7,976,993	\$6,890,537	\$7,429,066	\$7,214,766	\$7,598,775
University Funds					
Grants/Contracts	\$67,956,805	\$59,960,958	\$51,330,188	\$53,348,243	\$68,222,117
Indirect Cost Recovery	\$12,925,818	\$12,775,801	\$13,747,176	\$13,640,272	\$14,394,406
Endowment	\$388,185	\$397,368	\$405,770	\$416,380	\$433,269
Gifts	\$1,898,864	\$2,486,512	\$2,179,381	\$2,252,537	\$1,835,162
State Special	\$340,743	\$340,743	\$340,743	\$340,743	\$340,743
Other Income	\$5,952,159	\$6,828,386	\$5,755,774	\$5,173,133	\$4,791,321
Total	\$119,916,901	\$112,407,457	\$104,485,040	\$105,014,820	\$120,815,092
		·			

Template C1-1 Sources of Funds and Expenditures by Major Category, 2017 to 202
--

Expenditures						
	2017	2018	2019	2020	2021	
Faculty Salaries	\$18,084,082	\$17,549,367	\$17,678,416	\$ 17,462,764	\$16,644,692	
Staff Salaries	\$24,182,679	\$23,195,412	\$23,725,272	\$ 23,697,047	\$24,492,372	
Fringe Benefits	\$15,393,639	\$15,221,656	\$16,162,790	\$ 16,851,286	\$17,842,235	
Operations	\$38,967,495	\$31,234,179	\$20,954,541	\$ 23,028,888	\$35,693,356	
Travel	\$1,653,115	\$1,713,978	\$1,715,714	\$ 1,539,831	\$58,678	
Student Support	\$7,835,439	\$6,737,021	\$7,030,400	\$ 7,376,378	\$9,008,036	
University Tax	\$16,095,369	\$15,673,607	\$15,894,650	\$ 15,475,446	\$15,343,359	
Other (explain)						
Total	\$122,211,818	\$111,325,220	\$103,161,783	\$ 105,431,640	\$118,082,728	

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

Strengths

- SPH is in sound financial health.
- SPH has been very successful in adjusting to the changing funding climate.
- Faculty salaries closely reflect or exceed those of peer institutions.

Weaknesses

- Changes in external and state funding pose a significant challenge. Tuition revenue continues to play an important role in SPH's financial picture. While the school attempts to keep tuition increases to a minimum (average of 2% over the last few years), the cost of public health education continues to be prohibitive for some students. This tension needs to be resolved through reform at the federal and state levels.
- Although SPH has increased scholarship funds awarded, this amount still falls far short of what students need. As a result, some very good applicants are lost to more affluent institutions.
- Gifts and endowments to support MPH students are inadequate. Only 10% of alumni contribute to the school's annual fund-raising campaign.

C2. Faculty Resources

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

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

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

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

CONCENTRATION	MASTERS			DOCTORAL	
CONCENTION	PIF 1*	PIF 2*	FACULTY 3 [^]	PIF 4*	FACULIT+
BIOSTATISTICS MPH (PHDS)/ MS/PhD	Joe Koopmeiners 1.0	Julian Wolfson 1.0	Andrew Mugglin 0.2	Ann Brearley 1.0	PIF: 28 Non-PIF: 2
CLINICAL RESEARCH MS	Shalini Kulasingam 1.0	Pamela Lutsey 1.0	Kamakshi Lakshiminarayan 0.9	NA	PIF: 2 Non-PIF: 1
COMMUNITY HEALTH PROMOTION MPH	Jennifer Linde 1.0	Traci Toomey 1.0	Rhonda Jones- Webb 1.0	NA	PIF: 5 Non-PIF: 4
ENVIRONMENTAL HEALTH MPH/MS/PhD	Matt Simcik 1.0	Susan Arnold 1.0	Jesse Berman 1.0	Silvia Balbo 1.0	PIF: 21 Non-PIF: 3
EPIDEMIOLOGY MPH/PhD	Richard Maclehose 1.0	Toben Nelson 1.0	Ryan Demmer 1.0	Darin Erickson 1.0	PIF: 15 Non-PIF: 7
HEALTH SERVICES RESEARCH, POLICY & ADMINISTRATION MS/PhD	Donna McAlpine 1.0	Peter Huckfeldt 1.0	Tetyana Shippee 1.0	Karen Kuntz 1.0	PIF: 20 Non-PIF: 11
MATERNAL & CHILD HEALTH MPH	Ellen Demerath 1.0	Susan Mason 1.0	Zobeida Bonilla 1.0	NA	PIF: 5 Non-PIF: 3

PUBLIC HEALTH ADMINISTRATION & POLICY MPH	Carrie Henning- Smith 1.0	Sarah Gollust 1.0	Rebecca Wurtz 0.9	NA	PIF: 9 Non-PIF: 11
PUBLIC HEALTH NUTRITION MPH	Melissa Laska 1.0	Lisa Harnack 1.0	Jamie Stang 0.9	NA	PIF: 7 Non-PIF: 2
PUBLIC HEALTH PRACTICE MPH	Jeff Bender 1.0	Craig Hedberg 1.0	Linda Frizzell 1.0	NA	PIF: 3 Non-PIF: 15
	Named PIF Total PIF Non-PIF	30 112 68			

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.

Faculty documented in Table C2-1 were pulled from Human Resources electronic records on October 21, 2020, coinciding with FY21, pay period 9; data was further reviewed edited on September 20, 2021 and again on January 6, 2022. The data was organized by division, then further organized by program. This data pull shows the SPH is represented by 112 Primary Instructional Faculty (1.0 FTE) and 66 non-Primary Instructional Faculty (less than 1.0 FTE). The SPH considers tenure, tenure-track or full-time contract faculty as 100%, or 1.0 FTE, and have regular responsibility for instruction. Non-PIF classifications are faculty with appointments outside the SPH, hold a joint appointment with another school/college, are part time or intermittent instructors (hired to teach on a non-regular basis), teach undergraduates, have no teaching responsibilities, or are partially retired.

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

Not applicable.

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.

Template C2-2. Faculty regularly involved in advising, mentoring and the integrative experience

General Advising & Career Counseling							
Degree Level Average Min Max							
Bachelor's	NA	NA	NA				
Master's	5.4	1	80				
Doctoral	1.6	1	7				

Advising in MPH Integrative Experience				
Average	Min	Мах		
1.6	1	15		

Mentoring/Primary Advising on Thesis, Dissertation or Integrative Project								
Degree Average Min Max								
DrPH	NA	NA	NA					
PhD	1	1	5					
Master's other than MPH	1.4	1	7					

The public health practice program engages supporting faculty from related disciplines, partner schools and programs to help with advising. For example, within the school of dentistry, faculty were identified and asked if they would be willing to serve in the review of joint degree applicants, mentor students in their applied practice and integrated learning experiences, and provide input into the strategic direction of the public health practice program.

Given his role as director for the public health practice concentration, Dr. Jeff Bender is listed in our electronic systems as the official faculty advisor for students, bringing the advising number to its maximum of 80 in the table above. The following individuals have recently been added as affiliate faculty to support the advising of public health practice students from their respective schools and institutions. These are individuals who also support public health education within their schools.

Dentistry: <u>Karin Quick, DDS, PhD | School of Dentistry</u> Urban and Regional Planning: <u>Yingling Fan | Hubert H. Humphrey School of Public Affairs</u> Public Policy: <u>Audrey Dorélien | Hubert H. Humphrey School of Public Affairs</u> Pharmacy: <u>Laura Palombi, PharmD, MPH, MAT, AE-C | College of Pharmacy</u> Nursing: <u>Judith M. Pechacek, DNP, RN, CENP | School of Nursing</u> Mayo Program: <u>Murad Hassan, MD, Mayo Clinic</u> Veterinary MPH liaison faculty/co-advisors: Auburn University - Dr. Kelley Steury Lincoln Memorial University - Dr. Don Noah Purdue University - Dr. George Moore University of Minnesota - Dr. Scott Wells Western University of Health Sciences - Dr. Helen Engelke

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 (e.g., The class size was conducive to my learning)

Here we refer to data from the graduate outcomes survey completed by respondents when they apply for graduation. In February 2021 we added the target question (whether students feel class sizes are conducive to learning) and as such, data are limited to responses collected during or after that time. The survey had 289 total responses, of a starting sample size of 526 students, with a 55% response rate. Respondents included 270 masters level students and 19 PhD students. Graduates utilized a four-point Likert scale to respond to the question, "In general, the class size in my courses was conducive to my learning." The average overall satisfaction rating of class size was 3.74, with one being "strongly disagree" and four being "strongly agree." The average scores by degree type and program are as follows:

Degree	Total Responses	% of Total Responses	Average Likert Score
MHA	37	12.8	3.81
MPH	218	75.4	3.70
MS	15	5.2	3.57
PhD	19	6.6	3.89
Total	289	100	3.74

Program	Total Responses	Average Likert Score
Biostatistics	13	3.84
Community Health Promotion	37	3.76
Clinical Research	4	3.75
Environmental Health	26	3.69
Epidemiology	46	3.67
Health Services Research, Policy & Administration	2	4.00
Maternal and Child Health	32	3.68
Nutrition	13	3.92
Public Health Administration & Policy	53	3.79
Public Health Practice	26	3.53

Overall these data show us that students are satisfied with class size and how it relates to their learning.

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

The gradSERU survey asks students their agreement on two questions related to availability of faculty: 1) there are open lines of communication between students and faculty regarding student needs, concerns, and suggestions, and 2) faculty members in my graduate/professional program are available to talk with me. In 2019, just over 87% of SPH graduate students indicated they either agree or strongly agree that there are open lines of communication between students and faculty; in 2021, that agreement fell slightly to 84% (n=438). In 2019, nearly 86% of SPH students agreed or strongly agreed that faculty are available to talk to them; in 2021, that number rose to 93% of students (n=436).

The 2020 gradSERU was focused largely on the response to the pandemic. The question related to faculty availability on this version of the survey was: which of the following academic factors, if any, were an obstacle to your successful transition to online learning during the COVID-19 pandemic? Here students were able to choose from 15 obstacles, of which, "lack of access to instructor" was one such obstacle; only 14.5% of SPH students felt that a lack of instructor access was an obstacle to their learning.

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

Qualitative data was also collected via the graduate outcomes survey beginning in February 2021. We received 40 qualitative comments, or 14% of the 289 surveys completed. Qualitative comments fell into three categories: positive (35%), negative (37.5%), and other (27.5%). Below are examples of qualitative data of student perceptions of class size and availability of faculty:

Positive

- As a smaller class of 28, I felt more easily able to get to know my classmates and work more effectively with them.
- Small class sizes encouraged engaging conversations.
- Both my in-person and virtual class sizes were ideal.

Negative

- The asynchronous core courses were large and those that did not break the class into consistent small groups were not as conducive to learning.
- Bigger class sizes were harder to participate in during virtual learning.
- Some of my core coursework had fairly large class sizes. In addition to these courses being online, I didn't feel like I got to know my professors very well. Almost all of my coursework was online, so it is difficult to truly gauge whether or not the sizes were conducive. Generally, I think anytime there were more than ~30 people in a class, it was more difficult to collaborate and get to know classmates.

<u>Other</u>

- Accommodation was available.
- I would have loved more small group work if smaller classes were not possible.
- I liked having 28 people but I think 35 would be prime. The more the merrier as long as there are seats.

Please find all qualitative comments regarding student perceptions of class size and availability of faculty in the Electronic Resource File, Criterion C folder, C2.6 subfolder.

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

Strengths

• SPH has a large complement of faculty who are seen as available for students. We have positive quantitative feedback on student's perception of class size and learning.

Weaknesses

• Data on student perception of class size and faculty availability was collected during an unusual time where all learning was virtual and all work was conducted remotely due to the COVID-19 pandemic.

C3. Staff and Other Personnel Resources

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

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

SPH Staff Support	Mission		Mission Support & Facilities		Leadership & Oversight		Total Headcount	Total FTE
	Headcount	FTE	Headcount	FTE	Headcount	FTE		
Audit/Finance/HR/ Info Tech/Legal			56	55	9	9	64	63
Clerical Support			17	17			17	17
Direct Academic	186	166.08			11	10.75	186	166.08
Leadership					4	2.20	4	2.20
Other Support			37	36.75	12	11.69	49	48.44
Skilled Generalists			10	8.80	9	9	19	17.80
Totals	186	166.08	120	117.55	45	42.64	351	326.27

Template C3-1: Staff Support as of 11/3/2021

Additional context for the subgroups in the above table:

- audit/finance/HR/IT/legal: also includes our office for e-learning services
- clerical support: administrative, office and clerical support
- direct academic: research, education program administrators
- leadership: deans
- other support: advancement, communications, student services
- skilled generalists: directors (school and division leadership), administrative consultants and managers, office supervisors, program/project specialists.

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

In addition to faculty and professional staff, the SPH workforce includes postdoctoral researchers, graduate assistants, student workers, and temporary/casual employees. Graduate Assistantships (teaching assistants/TAs or research assistants/ RAs) allow graduate students to receive hands-on experience working on research projects, including analyzing data, writing papers and contributing to grant proposals, and/or gaining graduate-level teaching experience in specific courses under the supervision of course primary instructors. These positions also provide graduate students with up to 100% tuition support.

Graduate Assistants	FY19	FY20	FY21	FY22
Headcount	206	200	220	209
FTE	72	73	78	78

Fiscal Year Fall Snap-shot pay period 9 pay date (retrieved from: Employee Headcount and FTE Job Category Report from HR Analytics on 9/17/21)

As the School of Public Health operates within a larger University system, we contribute annually to central cost pools which allow us to use the common or centralized offices that benefit the entire University. These resources allow SPH to build strong partnerships that further enhance the staff expertise across the school. Such offices include:

- Office of the Vice President for Research, offices and our assigned partners
- Office of Information Technology, offices and our assigned partners
- Office of Human Resources, offices and our assigned partners
- Senior Vice President for Finance & Operations, offices and our assigned partners
- University Relations, offices and our assigned partners
- Office of Equity & Diversity (including Equal Employment Opportunity Commission, Disability Resources Center), offices and our assigned partners
- Graduate School, offices and our assigned partners

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

Mission:

Research (direct academic): Research support staff fluctuates based on the needs of individual grants. Teams have been developed to support grant proposal development and submissions so that we are poised to bring more grant monies to the school; we are positioned to recruit staff quickly once notified of grant funding. We conduct regular audits of staffing levels to support fluctuating grant needs and to retain staff across project lifecycles.

Mission Support:

Education & Learning: The Office of E-Learning Services has grown due to the pandemic to ensure the delivery of needed services to students. The student services team has also recently been restructured with more strategic leadership and operational efficiencies in specific services areas: prospective students, enrolled students, continuing and professional development.

Staffing levels for mission support have remained stable over the past five years indicating that we deliver services and mission support adequately.

We have data from the last two employee engagement surveys that add to the fact that we are sufficiently staffed.

Statement	% Staff Responding Favorably		
Statement	2019	2021	
I have the information I need to do my job well.	82	81	
I have the resources I need to do my job effectively.	79	77	
Conditions in my job allow me to be about as productive as I can be.	70	72	
The people in my department are committed to delivering high quality services.	89	89	
My department is committed to providing high quality customer support (i.e. responsiveness, flexibility, turnaround).	79	72	

We also recognize there is room for growth in particular areas as well. While we continue to have strong cooperative spirit within units and faculty have a high sense of support of interdisciplinary work, the staff viewpoint of collaboration remains low. Staff also perceive inequitable distributions of workloads, while similarly feeling individually supported to be innovative.
4) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.

Strengths

- We have a team of strong, experienced research grants support staff. Across the school, this team provides support to our faculty in the identification of opportunities, preparation, submission and management of grants funded by numerous local and national funding agencies.
- Over the course of the pandemic our academic technology support has proven invaluable. Though stressed through the pandemic, this team fully rose to the occasion, allowing us to make strides in aligning the SPH through their support of educational programs.
- The school has focused on the student experience and reorganized student services around the prospective student and enrolled student experiences together with learning innovations and lifelong learning, education of the public health workforce.
- Staff and faculty alike have noted that while working at home during the pandemic, they felt more connected to their peers outside their immediate work group, citing increased access to information from around the SPH. We have made significant investments in community forums, allowing staff to not only express their opinions, but give valuable input into leadership considerations. SPH plans to continue to use technology to improve on these areas of strength.
- Over the course of University emergency operations in 2020 21 where all but essential
 personnel worked remotely, SPH faculty and staff were productive and resilient. As normal
 operations commenced, the school conducted a survey of staff preferences for work
 arrangements and built a framework to pilot flexible work arrangements to meet faculty and staff
 desires for options on when and where to perform work. Response to this evaluation was very
 positive.

Weaknesses

- Space fragmentation continues to be a complicating factor for SPH, resulting in the need for strong student support services and alignment of these functions. Through the last year and a half of pandemic life, we have had the opportunity to evaluate numerous virtual systems to help us mitigate this issue until the time when the entire school can be in one location.
- Like other institutions of higher education, the University of Minnesota is responding to an unprecedented confluence of pressures, some of which were exacerbated by COVID-19. Shifting enrollments, uncertainty of public revenue, technology change, and increasing expectations of the University to provide leadership in social and environmental responsibility add strain to financial and human resources. Moreover, the speed and uncertainty of change require new levels of institutional agility and flexibility. We are, in collaboration with the larger University, addressing this with the initiation of the PEAK project (noted below).

Plans for Improvement

The University is a complex organization where mission-support services are marbled with aspects of service delivery at all levels: system, campus, college/school, and department/division. In 2021, University leadership launched the Positioned for Excellence, Alignment and Knowledge (PEAK) Initiative as a system-wide effort to identify opportunities across non-academic functions to increase efficiency or gain capacity, which in turn will help steer our teaching, research, and outreach mission into the future. The assessment phase was completed by the end June 2021. This evaluation is currently being communicated across the University for feedback with the design and implementation phase scheduled to begin October 2021. SPH sees PEAK as an opportunity to fine-tune our staff service delivery models and provide even more optimized support to our faculty and students. Functions within the scope of the project were selected as they represent an opportunity to leverage system-wide scale and include:

- general administration
- finance
- information technology
- facilities management
- student services
- human resources

- communications and marketing
- global programs and activities
- research administration
 - procurement
- development
- auxiliary activities

C4. Physical Resources

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

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

SPH's administration is centralized in the Mayo Memorial Building on the University's Minneapolis East Bank Campus. The space is adequate to accommodate faculty, staff, and students, but all divisions and programs are dispersed across ten locations, both on and off campus in University-owned and leased property.

• Faculty office space

All full-time faculty have private offices; part-time faculty generally share space depending on how much time they spend on campus. Access to University buildings has recently been limited due to security concerns. During public hours, all faculty have access to all buildings via a security card, which also provides seven-days-a-week access to most buildings during University hours. All faculty have key access to individual offices. Faculty and staff working in laboratories have additional security clearance to enter those more restrictive spaces.

• Staff office space

Staff in all SPH units have assigned office or cubicle space in most of the 10 buildings occupied by SPH across University campuses. An increasing number of staff are teleworking and, generally, do not have assigned workspaces but do have access to co-working spaces. The school routinely leases off-site spaces for research and administrative staff. Typically, these provide space for faculty research projects that involve close collaboration with community partners and participants.

Classrooms

Also included are five classrooms used almost exclusively by SPH as spaces for student learning, study areas, and computing resources. In addition, SPH has access to all of the classroom space available within the health sciences and across the University. This includes HSEC (Health Sciences Education Center), a state-of-the-art facility designed to transform health professional education in Minnesota. As one of the most comprehensive interprofessional education facilities in the country, HSEC is the premier training site for health professionals. This new education facility will enhance teamwork among health professionals, preparing students to meet the changing needs of communities across Minnesota and around the world.

• Shared student space

The student commons area (this space is named the SPHere) includes a computer lab, study space, kitchen, and other amenities. Students make use of the CHIP (Center for Interdisciplinary Health Professions) student lounge area and HSEC (Health Sciences Education Center) which includes a state-of-the-art interprofessional student lounge, lactation rooms, meeting areas, and wellness studio. Each division offers study and congregation space for students in their facilities.

Laboratories, if applicable to public health degree school offerings

Environmental Health Sciences Labs

The Environmental Health Sciences (EHS) Environmental Chemistry Lab located in the Mayo Building is equipped with extraction and processing equipment for trace analysis of environmental samples. The space includes three GC/MS, one LC/MS, a GC/ECD and a scintillation counter.

The EHS Industrial Hygiene Lab located in the Boynton Health Services Building is equipped with instrumentation for measurement of gases, vapors, and particulate matter. The laboratory has 10 Dust-Trak nephelometers, 15 gravimetric PM2.5 indoor and personal samplers, Condensation Particle Counters, portable-sized distribution measuring devices, microbalances, and a gas chromatograph with a flame ionization detector. Major test apparatuses include a filter tester, a wind tunnel, a calm air chamber, three laboratory hoods, and two biosafety cabinets. It also has equipment for calibration of the sampling instrumentation (such as the Gilian calibrators) and a wide range of pumps for use with the various sampling devices.

The Environmental Health Sciences Biological Lab located on the 11th floor of the Mayo Building contains tissue culture facilities; a high-speed centrifuge; rotors; microfuges; speed vac; environmental shaker; visible and UV spectrophotometer; fluorimeter; luminometer polymerase chain reaction (PCR); liquid scintillation counter; dark room; electrophoresis and electroblotting equipment for protein and nucleic acid purification; a Bio-Rad Econo System; and a chromatography cabinet for doing work at four degrees Centigrade.

Epidemiology & Community Health Labs

The Epidemiology Clinical Research Center (ECRC) is a space designated for population-based clinical research studies. The ECRC meets the diverse needs of studies within the Division of Epidemiology and Community Health and promotes partnerships between colleagues throughout the Health Sciences at the University of Minnesota. Managed by a collaborative of researchers to accommodate a wide range of projects, this ECRC responds to the ever-changing research portfolio of the Division. The center has supported principal investigators conducting small pilot studies to large multi-center cohort studies. The ECRC averages 300 participant visits per month, with some studies seeing as many as 1000 participant visits per month at peak participation.

The ECRC operates as a learning center, data collection hub, phlebotomy site and processing lab. The lab has the following equipment: refrigerated centrifuges, refrigerators, ultra-low freezers, and prepackaged test kits. DEXA machines, treadmills, an audiology lab, cardiac ultrasound equipment and a measurement device lending library are also used by a variety of study staff.

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

SPH has adequate physical resources to fulfill its mission, goals, and objectives, and to achieve its outcome indicators in education, research, and service. However, the location of SPH buildings across campus, and even off campus, presents challenges.

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

Strengths

- SPH has adequate faculty and resources to fulfill its mission, goals and objectives, and to achieve its outcome indicators in education, research, and service.
- The school employs a well-qualified and diverse full-time professional, administrative, and civil service/bargaining unit support staff.
- The school has adequate laboratory space, an extensive array of computer facilities and equipment, and outstanding library and information resources.
- The school enjoys highly productive local, state, national, and global educational and research partnerships.

Weaknesses

• SPH is dispersed among 10 locations on the University campus, and has been for more than 50 years.

C5. Information and Technology Resources

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

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

• Library resources and support available for students and faculty

University of Minnesota Libraries Background

The University's <u>award-winning library</u> is the largest research library in the region. Housed in five major facilities and 11 branch sites, the University library system comprises more than 8.2 million volumes and over 114,000 serial subscriptions. Approximately 1.8 million users visit the libraries each year, with an additional 2.4 million web visits.

Health Sciences Libraries Background

The Bio-Medical Library, along with the Wangensteeen Historical Library of Biology and Medicine and the Veterinary Medical Library, operate together as the Health Sciences Libraries. The Bio-Medical Library is located on the east bank campus of the University of Minnesota-Twin Cities and serves the teaching, research, and outreach missions of the School of Dentistry, Medical School, School of Nursing, College of Pharmacy, School of Public Health and the Center for Allied Health programs. The Bio-Medical Library is the primary library used by public health staff, faculty and students. The library covers three floors, includes over 60,000 square feet of space and has seating capacity for 464 individuals. This library is the major biomedical research collection in the upper Midwest and holds 460,000 volumes and subscribes to over 5,500 print and online periodicals. The library provides access to databases such as PubMed, OVID Medline, CINAHL, PsycInfo, MICROMEDEX, and many others. The library's electronic journals, books, and databases are available through their website. Students, faculty, and staff can access the vast majority of these resources off campus through the database portals at lib.umn.edu.

Library Liaison Model

The University Libraries utilize a liaison model of service. <u>Shanda Hunt</u>, MPH, serves as Liaison & Data Curation Specialist to the School of Public Health, focusing on the needs of students, instructors, and researchers. Shanda received her Master's Degree in Public Health from the University of Minnesota. She was a research coordinator in the UMN School of Public Health before taking on a new career in the University Libraries. She is available to assist faculty and research centers with literature reviews for grants, publications, and evaluations of center success. She can help researchers organize their data, as well as understand changing funder and publisher requirements for data management and sharing. There are additional library liaisons who specialize in areas of research services, funder policy compliance, media, and copyright. The liaison model of service allows the Library to offer users information science expertise via uniquely qualified subject specialists. In addition to the liaison librarian, the Bio-Medical Library includes twenty-nine full-time staff who provide a variety of services for faculty and students, including reference, course reserves, and acquisition of new materials that support teaching, learning, and research. Liaisons and library staff also provide course integrated instruction, one-on-one consultations, librarian-mediated literature searches, course resources, research consultations, workshops and classes, and office calls.

Library Online Reserves

The University libraries provide <u>online course reserve services</u> in coordination with the University bookstore to ensure that students can access digital materials either free through the Library's system or

with the payment of royalties but delivered in digital format. The SPH E-Learning Services team works with the Online Reserves team to ensure that all course materials are prepared prior to the semester for students in online courses and that faculty are aware of how to make changes.

New and Improved Spaces and Services in 2020

The Bio-Medical Library has transitioned to the brand new <u>Health Sciences Education Center</u> with a more dedicated focus on active learning. The current Bio-Medical Library has <u>enhanced technology to support</u> <u>data visualization</u> such as large monitors, software, and a virtual reality studio, but these features will be expanded in the <u>new space</u>. The Bio-Medical Library will be providing programming and services around data visualization, makerspaces, audio/visual recording, and virtual reality.

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

The Office of Information Technology (OIT) is the University's central IT unit and provides enterprise-level technologies and services to all SPH students. These services cover the general computing needs of students including access to commonly needed software, reduced-cost computers and accessories, and computer labs with special-purpose software and devices. Software available to students at no cost includes the full Microsoft Office suite, ArcGIS, Endnote Online as well as other commonly-needed applications. OIT also provides other software at a low cost, including NVivo, Stata and other Microsoft apps not included in Office.

Included in the services provided by OIT are managed Google GSuite for Education accounts that provide email, calendar, storage and other Google services. Students get unlimited storage of email and files in Google Drive. OIT also provides unlimited file storage on Box.com, which allows for storage of more sensitive data if needed for project or coursework.

Especially important over the past months, and increasingly important in the future is the capability for remote instruction and meeting. OIT provides full access to the Zoom video meeting platform for all students. Students can use Zoom to attend classes remotely, and they can use it for arranging personal study groups and for meeting with faculty.

SPH IT staff provide additional services such as no cost SAS statistics software, and additional computer lab space that can be used for lab courses or for student work. Connected with the SPHere student lounge is a lab with 14 computers and printing equipment that is available to students at all times. These computers are available for remote use as well. In addition to SPH-provided lab spaces for all students, each division in the school also has lab space for students with other software especially useful and relevant to that division's coursework.

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

All of the centrally provided software and services mentioned above as available to students are also available to faculty, plus faculty have access to additional resources for teaching and research. Software such as Adobe Acrobat Pro and computer security products are available at no cost for faculty and staff, and the Canvas course management system is provided for all courses for managing course content and activities.

SPH faculty have access to a wide range of technology-equipped classrooms to facilitate their particular needs. In addition to the usual video screens for presentations, many classrooms have audio and video conferencing abilities to include remote students, and innovative teaching spaces are available for group discussion and student collaboration. Some classrooms have multiple video screens where students can share their work for collaborative class situations. SPH has a classroom outfitted with a PC at every seat for teaching computing-centric courses, and these PCs have been configured for remote access to enable the same level of technology while teaching remotely. Laptop carts are also available in other

classrooms, which allows faculty to provide equipment and software for use during class and to ensure that all students are set up consistently.

For conducting research, a large number of physical and virtual servers meet a variety of needs, from statistical computing and modeling, to web and database hosting, to file sharing. In addition to the general-needs software provided by OIT for all faculty, SPH provides additional software at no cost such as SAS statistics software that is widely used in public health research.

• Technical assistance available for students and faculty

The UMN OIT and SPH IT work together to provide a wide range of IT consulting and support. Students and faculty have access to IT support 24 hours a day via email, text chat, and phone. IT help is therefore available whenever it is needed. In addition to the extensive support of general needs provided by OIT, SPH IT staff provide specialized consulting for research needs and help with software that is primarily used in public health, such as statistics and modelling tools.

For faculty, SPH IT helps with management of servers and software used for data collection and analysis. The school and division student services teams assist faculty with administrative aspects of managing courses, as well as providing data about expected student enrollments and course evaluations.

In addition to providing instructional design expertise, the SPH Office of E-Learning Services establishes standards of effective practices for teaching and learning using the Canvas Learning Management System (LMS), asynchronous and synchronous teaching, and use of learning technologies that enhance the classroom. The team provides one-on-one consulting, and supports faculty in myriad ways. For example, UMN's OIT offers urgent basic technical help 24/7, and a Google group email monitored by the OIT team provides technology consulting/support for online and hybrid courses that are outside of the planned activities for the semester. ELS also provides multimedia lecture production and Canvas course site design, while maintaining connections with the academic technology communities of practice and operational governance across the University in order to provide faculty with streamlined information about academic technology support.

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

SPH faculty and students are well-supplied with information technology equipment, software, and support necessary for teaching, completing coursework, and conducting research. While this comes from a variety of sources, the end result is that all needs are well met.

The UMN OIT conducts an annual survey of staff and students to evaluate how well OIT and Schoolspecific IT needs are being met. In the most recent survey both the OIT and the SPH scored very favorably.

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

Strengths

 Because SPH employs a dedicated IT support staff, we are able to provide specialized assistance directly suited to the needs of the faculty and students in the school, rather than relying only on the general-purpose support from OIT. The SPH IT staff have many years of service and deep expertise in the unique needs of public health professionals. Having their experience and skill applied directly in the school allows for close attention to the specific needs of the SPH students and faculty, and allows for agile adaptation as teaching needs change. SPH also has specialized academic technology staff who report to the associate dean for education in order to align with the educational needs of SPH.

Weaknesses

• As with other aspects of the SPH, the dispersed geographic location of the IT support staff as well as the faculty and students creates challenges for providing the same high level of support across the entire school. Efforts are underway to standardize existing local IT support across the school to help ensure that all faculty and students have full access to all support services.

D1. MPH & DrPH Foundational Public Health Knowledge

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

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

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

Five MPH programs require students to take PubH 6250 Foundations in Public Health (2 credits) to learn the foundational public health knowledge. Students can bypass this requirement if they enter the program with a bachelor's or MPH degree from a CEPH-accredited program or school, or pass an equivalency exam. Three MPH programs teach these concepts in program-specific courses instead. See the following D1-1 table.

PubH 6250 Foundations of Public Health is required by the following MPH degrees:

- Environmental Health
- Maternal and Child Health
- Public Health Administration and Policy
- Public Health Data Science
- Public Health Practice

Three MPH programs—community health promotion, epidemiology, and public health nutrition—use program specific courses for each knowledge domain, also illustrated in Template D1-1. The full D1-1 tables can be found in the Electronic Resource File, Criterion D folder, D1-1 subfolder.

Template D1-1

Content Coverage of Foundational Public Health Knowledge		
Content	Course number(s) & name(s) or other educational requirements	
	PubH 6250 - Foundations of Public Health	
1. Explain public health history, philosophy and values.	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)	
	PubH 6341 - Epidemiologic Methods I (Epi)	
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	

Content Coverage of Foundational Public Health Knowledge		
Content	Course number(s) & name(s) or other educational requirements	
2 Identify the core functions of public health and the	PubH 6250 - Foundations of Public Health	
	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)	
10 Essential Services.*	PubH 6342 - Epidemiologic Methods II (Epi)	
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	
	PubH 6250 - Foundations of Public Health	
3. Explain the role of quantitative and qualitative	PubH 6320 - Fundamentals of Epidemiology (CHP)	
methods and sciences in describing and assessing a population's health.	PubH 6341 - Epidemiologic Methods I (CHP & Epi)	
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	
	PubH 6250 - Foundations of Public Health	
4. List major causes and trends of morbidity and	PubH 6320 - Fundamentals of Epidemiology (CHP)	
mortality in the US or other community relevant to	PubH 6341 - Epidemiologic Methods I (CHP, Epi)	
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	
	PubH 6250 - Foundations of Public Health	
5. Discuss the science of primary, secondary, and	PubH 6320 - Fundamentals of Epidemiology (CHP)	
health promotion, screening, etc.	PubH 6341 - Epidemiologic Methods I (CHP, Epi)	
,	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	
	PubH 6250 - Foundations of Public Health	
	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)	
6. Explain the critical importance of evidence in	PubH 6320 - Fundamentals of Epidemiology (CHP)	
advancing public nearth knowledge.	PubH 6341 - Epidemiologic Methods I (CHP, Epi)	
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	
	PubH 6250 - Foundations of Public Health	
7. Explain effects of environmental factors on a	PubH 6102 - Issues in Environmental and Occupational Health (CHP, Epi)	
population's nearth.	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)	

Content Coverage of Foundational Public Health Knowledge	
Content	Course number(s) & name(s) or other educational requirements
	PubH 6250 - Foundations of Public Health
8. Explain biological and genetic factors that affect a	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)
population's health.	PubH 6102 - Issues in Environmental and Occupational Health (CHP & Epi)
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)
	PubH 6250 - Foundations of Public Health
9. Explain behavioral and psychological factors that	PubH 6020 - Social & Behavioral Health (Epi)
affect a population's health.	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)
	PubH 6250 - Foundations of Public Health
10. Explain the social, political, and economic	PubH 6020 - Social & Behavioral Health (Epi)
determinants of health and how they contribute to	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)
	PubH 6250 - Foundations of Public Health
11 Explain how globalization affects global burdens	PubH 6050 - Community Health Promotion I: Integrating Theory, Evidence, and Context (CHP)
of disease.	PubH 6365 – Global Challenges in Infectious Disease Epidemiology (Epi)
	PubH 6901 – Foundations of Public Health Nutrition Leadership (PHN)
12. Explain an ecological perspective on the	PubH 6250 - Foundations of Public Health
connections among human health, animal health and ecosystem health (e.g., One Health).	PubH 6102 – Issues in Environmental and Occupational Health (CHP, Epi, PHN)

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.

Syllabi and supporting documentation for the courses above can be found in the Electronic Resource File, Criterion D folder, D1.2 subfolder, organized by course.

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

Strengths

- One of our core courses, PubH 6250 Foundations of Public Health, embeds foundational public health knowledge required by almost all MPH programs, as well as all MS and PhD programs. We offer this course online during fall, spring, and summer semesters, providing optimal student access. This course gets excellent course evaluations.
- Three MPH programs—public health nutrition, community health promotion, and epidemiology— mapped the foundational public health knowledge to their specialized curriculum, and therefore do not require their students to take PubH 6250. This allows students in these programs to take more elective credits.

Weaknesses

• Currently, we offer PubH 6250 only online, while inevitably some students prefer to take courses in person.

D2. MPH Foundational Competencies

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

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

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.

The MPH core coursework addresses and assesses all 22 foundational competencies. Students may bypass core course requirements if they pass an equivalency exam.

Please note that PubH 7X96 Applied Practice Experience and PubH 7X94 Integrative Learning Experience are also part of the MPH core coursework. They are addressed later under the sections that are specific for Applied Practice and the Integrative Learning Experience.

Find the MPH core coursework and the D2-1 template below, as well as in the Electronic Resource File, Criterion D folder, D2.1 subfolder.

Administration

PubH 6751 Principles of Management in Health Services Organizations - 2 cr

Behavioral Science

PubH 6020 Fundamentals of Social and Behavioral Science – 2 cr PubH 6050 Community Health Theory and Practice I [CHP students only] – 3 cr PubH 6914 Community Nutrition Intervention [PHN students only] – 3 cr

Biostatistics

PubH 6414 Biostatistical Literacy – 3 cr (and a statistical programming course**) **OR** PubH 6450 Biostatistics I – 4 cr

Environmental Health

PubH 6102 Issues in Environmental and Occupational Health - 2 cr

Epidemiology

PubH 6320 Fundamentals of Epidemiology – 3 cr OR PubH 6341 Epidemiologic Methods I – 3 cr

Ethics

PubH 6741 Ethics in Public Health: Professional Practice and Policy - 1 cr

Foundational Public Health Knowledge

PubH 6250 Foundations of Public Health - 2 cr

**Students who enroll in PubH 6414 are required to complete one of the following programing courses:

PubH 6107 Excel and Access in PH Settings, 1 cr PubH 6123 Violence Prevention & Control: Theory, Research, & Application, 2 cr PubH 6325 Data Processing PC-SAS, 1 cr PubH 6420 Intro to SAS Programming, 1 cr PubH 6470 SAS Procedures and Data Analysis, 3 cr PubH 6755 Planning and Budgeting for Public Health, 2 cr PubH 6813 Managing Electronic Health Information, 2 cr PubH 6845 Using Demographic Data for Policy Analysis, 3 cr PubH 7264 Fundamentals of Data Exploration and Visualizing Data in R, 1 cr PubH 7461 Exploring and Visualizing Data in R, 2 cr

Template D2-1: Community Health Promotion

Requirements for MPH degree, Community Health Promotion Concentration		
Course Number	Course Name	Credits
Public Health Core Requirements		
PubH 6050	Community Health Theory & Practice I	3 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr
PubH 6450	Biostatistics I	4 cr
PubH 6741	Ethics in Public Health: Professional Practice & Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7096	Applied Practice Experience	1-2 cr
PubH 7094	Integrative Learning Experience	1-2 cr
Program Core Requirements		

PubH 6045 OR	Skills for Policy Development OR	1 OR
PubH 6078	Public Health Policy as a Prevention Strategy	2 cr
PubH 6051	Community Health Theory & Practice II	3 cr
PubH 6034 OR	Evaluation I: Concepts OR	3 cr OR
PubH 6852	Program Evaluation in Health & Mental Health Settings	2 cr
PubH 6035	Evaluation II: Applications	3 cr
Other Courses		
Health Behavior & Policy Intervention	Students choose from a selection of 15 course options	6-7 cr
Evaluation-Related Methods	Students choose from a selection of 4 course options	1-4 cr
Electives		
Remaining elective credits may be selected in consultation with the advisor to reach the 48 credit minimum.		

Template D2-1: Environmental Health

Requirements for MPH degree, Environmental Health Sciences Concentration		
Course Number	Course Name	Credits
Public Health Core Requirements		
PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6250	Foundations of Public Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr
PubH 6414 OR PubH 6450	Biostatistical Literacy OR Biostatistics I	3 cr OR 4 cr

*Students who take PubH 6414 must also take one		
of the following courses:		
- PubH 6107	Excel and Access in Public Health Settings	1 cr
- PUDH 6123	Violence Prevention & Control: Theory, Research, & Application	2 Cr
- PUDH 0325 DubH 6420	Data Processing with PC-SAS	l Cr 1 or
- PubH 6420 PubH 6470	Introduction to SAS Programming	1 Cf 2 or
- FubH 0470 DubH 6755	Diapping & Rudgeting in Dublic Health	3 Cl
- Fubil 0755 - PubH 6813	Managing Electronic Health Info	2 Cl 2 cr
- PubH 6845	Using Demographic Data for Policy Analysis	2 Cl 3 cr
- PubH 7264	Data Visualizing Data in R	1 cr
- PubH 7461	Exploring and Visualizing Data in R	2 cr
Dubl 6744	Ethics in Dublic Locath, Drefessional Dreatics and Deligy	2 01
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7196	Applied Practice Experience	1-5 cr
PubH 7194	Integrative Learning Experience	1-5 cr
Program Core Requirements		
To meet EnHS Competency #1 students choose one		
of the following courses:		
of the following courses: PubH 6120 OR	Injury Prevention in the Workplace, Community, & Home	2 cr
of the following courses: PubH 6120 OR PubH 6140 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology	2 cr 2 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I	2 cr 2 cr 2 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases	2 cr 2 cr 2 cr 3 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards	2 cr 2 cr 2 cr 3 cr 2 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards	2 cr 2 cr 2 cr 3 cr 2 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses:	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards	2 cr 2 cr 2 cr 3 cr 2 cr
of the following courses: PubH 6120 OR PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr
of the following courses: PubH 6120 OR PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6140 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 2 cr 3 cr
of the following courses: PubH 6120 OR PubH 6120 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6140 OR PubH 6140 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6140 OR PubH 6159 OR PubH 6150 OR PubH 6159 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems Climate Change in Global Health	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 3 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6150 OR PubH 6150 OR PubH 6159 OR PubH 6150 OR PubH 6159 OR PubH 6150 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems Climate Change in Global Health Principles of Toxicology I	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 3 cr 2 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6150 OR PubH 6150 OR PubH 6159 OR PubH 6159 OR PubH 6161 OR PubH 6080 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems Climate Change in Global Health Principles of Toxicology I Regulatory Toxicology	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 3 cr 2 cr 2 cr 2 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6140 OR PubH 6150 OR PubH 6150 OR PubH 6150 OR PubH 6161 OR PubH 6182 OR	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems Climate Change in Global Health Principles of Toxicology I Regulatory Toxicology Ecology of Infectious Diseases	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 2 cr 2 cr 2 cr 3 cr 3 cr
of the following courses: PubH 6120 OR PubH 6140 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6140 OR PubH 6150 OR PubH 6150 OR PubH 6150 OR PubH 6150 OR PubH 6161 OR PubH 6182 OR PubH 6192	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems Climate Change in Global Health Principles of Toxicology I Regulatory Toxicology I Regulatory Toxicology Diseases Emerging Infectious Diseases: Current Issues Measurement &	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 3 cr
of the following courses: PubH 6120 OR PubH 6120 OR PubH 6159 OR PubH 6180 OR PubH 6181 To meet EnHS Competency #2 students choose one of the following courses: PubH 6140 OR PubH 6140 OR PubH 6140 OR PubH 6150 OR PubH 6159 OR PubH 6159 OR PubH 6150 OR PubH 6161 OR PubH 6182 OR PubH 6182 OR PubH 6192	Injury Prevention in the Workplace, Community, & Home Environmental & Occupational Epidemiology Principles of Toxicology I Ecology of Infectious Diseases Surveillance of Foodborne Diseases & Food Safety Hazards Environmental & Occupational Epidemiology GIS & Spatial Analysis Interdisciplinary Eval of Occ Health & Safety Field Problems Climate Change in Global Health Principles of Toxicology I Regulatory Toxicology I Regulatory Toxicology Ecology of Infectious Diseases Emerging Infectious Diseases: Current Issues Measurement & Properties of Air Cont	2 cr 2 cr 2 cr 3 cr 2 cr 2 cr 3 cr 3 cr 3 cr 3 cr 2 cr 2 cr 2 cr 2 cr 2 cr 2 cr 2 cr 2

To meet EnHS Competency #3 students choose one		
of the following courses:		
PubH 6140 OR	Environmental & Occupational Epidemiology	2 cr
PubH 6141 OR	GIS & Spatial Analysis	3 cr
PubH 6150 OR	Interdisciplinary Eval of Occ Health & Safety Field Problems	3 cr
PubH 6159 OR	Principles of Toxicology I	2 cr
PubH 6180 OR	Ecology of Infectious Diseases	3 cr
PubH 6181 OR	Surveillance of Foodborne Diseases & Food Safety Hazards	2 cr
PubH 6182 OR	Emerging Infectious Diseases: Current Issues	3 cr
PubH 6193	Advanced Topics in Human Exposure Science	2 cr
To meet EnHS Competency #4 students choose one		
of the following courses:		
PubH 6112 OR	Environmental Health Risk Assessment	2 cr
PubH 6123 OR	Violence Prevention & Control: Theory, Research & Application	2 cr
PubH 6130 OR	Occupational Medicine: Principles & Practice	2 cr
PubH 6140 OR	Environmental & Occupational Epidemiology	2 cr
PubH 6141 OR	GIS & Spatial Analysis	3 cr
PubH 6159 OR	Principles of Toxicology I	2 cr
PubH 6181	Surveillance of Foodborne Diseases & Food Safety Hazards	2 cr
To meet EnHS Competency #5 students choose one		
of the following courses:		
PubH 6112 OR	Environmental Health Risk Assessment	2 cr
PubH 6120 OR	Injury Prevention in the Workplace, Community & Home	2 cr
PubH 6161 OR	Regulatory Toxicology	2 cr
PubH 6174 OR	Control of Workplace Exposure	2 cr
PubH 6180 OR	Ecology of Infectious Diseases	3 cr
PubH 6182	Emerging Infectious Diseases: Current Issues	3 cr
Electives		
Students choose electives in consultation with their	Students can choose from a variety of electives; some select a	10 15 or
advisor to meet the 42 total credit minimum.	set of electives grouped by specialty area.	10-10 0

Template D2-1: Epidemiology

Requirements for MPH degree, Epidemiology Concentration			
Course Number	Course Name Credits		
Public Health Core Requirements			

PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6341	Epidemiologic Methods	3 cr
PubH 6450	Biostatistics I	4 cr
PubH 6741	Ethics in Public Health: Professional Practice and Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7396	Applied Practice Experience	1-2 cr
PubH 7394 OR PubH 6344	Integrative Learning Experience OR Secondary Data Analysis	2 cr
Program Core Requirements		
PubH 6325 OR PubH 6420	Data Processing Using PC-SAS OR Introduction to SAS Programming	1 cr
PubH 6342	Epidemiologic Methods II	3 cr
PubH 6343	Epidemiologic Methods III	4 cr
PubH 6350	Epidemiologic Methods III Lab	1 cr
PubH 6451	Biostatistics II	4 cr
Electives		
Epidemiology	Students choose from a selection of 6 options	2 cr
Remaining elective credits may be selected in consultation with the advisor to reach the 48 credit minimum.		9-10 cr

Template D2-1: Maternal & Child Health

Requirements for MPH degree, Maternal & Child Health Concentration		
Course Number	Course Name	Credits
Public Health Core Requirements		
PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6250	Foundations of Public Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr
PubH 6414 OR PubH 6450	Biostatistical Literacy OR Biostatistics I	3 cr OR 4 cr

*Students who take PubH 6414 must also take one		
or the following courses:	Event and Assess in Dublic Health Sattings	1 or
- FUDH 0107 DubH 6123	Violence Provention & Control: Theory Possarch & Application	
	Data Broccosing with DC SAS	2 Ci
- FUDH 0323 DubH 6420	Introduction to SAS Programming	1 Cl
- F UDIT 0420 DubU 6470	SAS Procedures and Data Analysis	2 or
- Fubii 0470 DubH 6755	Planning & Rudgeting in Public Health	2 or
- PubH 6813	Managing Electronic Health Info	2 cr
- PubH 6845	Using Demographic Data for Policy Analysis	2 cr
- PubH 7264	Data Visualizing Data in R	1 cr
- PubH 7461	Exploring and Visualizing Data in R	2 cr
PubH 6741	Ethics in Public Health: Professional Practice and Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7696	Applied Practice Experience	1-2 cr
PubH 7694	Integrative Learning Experience	1-2 cr
Program Core Requirements		
PubH 6630	Foundations of MCH Leadership	3 cr
PubH 6034 OR PubH 6852	Evaluation I: Concepts OR Program Evaluation in Health & Mental Health Settings	3 cr OR 2 cr
PubH 6673	Grant Writing for Public Health	1 cr
Other Courses		
Maternal & Child Health	Students choose from a selection of 7 options	6-8 cr
Methodological & Analytical Skills	Students choose from a selection of 18 options	3-5 cr
Management, Communications, Policy & Advocacy Skills	Students choose from a selection of 16 options	3-5 cr
Electives		
Remaining elective credits may be selected in consulta	ation with the advisor to reach the 42-48 credit minimum.	

Template D2-1: Public Health Administration & Policy

Requirements for MPH degree, Public Health Administration & Policy Concentration		
Course Number Course Name Credits		
Public Health Core Requirements		
PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr

PubH 6250	Foundations of Public Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr
PubH 6414 OR PubH 6450	Biostatistical Literacy OR Biostatistics I	3 cr OR 4 cr
*Students who take PubH 6414 must also take one		
of the following courses:		
- PubH 6107	Excel and Access in Public Health Settings	1 cr
- PubH 6123	Violence Prevention & Control: Theory, Research, & Application	2 cr
- PubH 6325	Data Processing with PC-SAS	1 cr
- PUDH 6420	Introduction to SAS Programming	1 Cr
- PubH 6755	Dianning & Budgeting in Dublic Health	2 cr
- PubH 6813	Managing Electronic Health Info	2 cr
- PubH 6845	Using Demographic Data for Policy Analysis	2 cr
- PubH 7264	Data Visualizing Data in R	1 cr
- PubH 7461	Exploring and Visualizing Data in R	2 cr
PubH 6741	Ethics in Public Health: Professional Practice and Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7796	Applied Practice Experience	2 cr
PubH 7794	Integrative Learning Experience	2 cr
Program Core Requirements		
PubH 6755	Planning & Budgeting for Public Health	2 cr
PubH 6724	Health Care System & Public Health	3 cr
PubH 6727	Health Leadership & Effecting Change	2 cr
PubH 6735	Principles of Health Policy	3 cr
PubH 6806	Principles of Public Health Research	2 cr
PubH 7784	Master's Project Seminar	2 cr
Electives		
Remaining elective credits may be selected in consultation with the advisor to reach the 42-44 credit minimum.	Students choose from a selection of 18 options	10-11 cr

Template D2-1: Public Health Data Science

Requirements for MPH degree, Public Health Data Science Concentration		
Course Number	Course Name	Credits
Public Health Core Requirements		
PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6250	Foundations of Public Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr
PubH 6450	Biostatistics I	4 cr
PubH 6741	Ethics in Public Health: Professional Practice and Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7496	Applied Practice Experience	1 cr
PubH 7494	Integrative Learning Experience	1 cr
Program Core Requirements		
PubH 6451	Biostatistics II	4 cr
PubH 7461	Exploring & Visualizing Data in R	2 cr
PubH 7462	Building Data Analysis Pipelines	2 cr
PubH 7463	Fundamentals of Prediction and Machine Learning	3 cr
PubH 7465	Biostatistical Consulting	3 cr
Electives		
Methods & Study Design	Students choose from a selection of 8 options	6 cr
Programming, Databases & Visualization	Students choose from a selection of 10 options	6 cr
Remaining elective credits may be selected in consultation with the advisor to reach the 43 credit minimum.		

Template D2-1: Public Health Nutrition

Requirements for MPH degree, Public Health Nutrition Concentration		
Course Number	Course Name	Credits
Public Health Core Requirements		
PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr

PubH 6414 OR PubH 6450	Biostatistical Literacy OR Biostatistics I	3 cr OR 4 cr
*Students who take PubH 6414		
must also take one of the		
following courses:	Excel and Access in Public Health Settings	1 cr
- PubH 6107	Violence Prevention & Control: Theory, Research, & Application	2 cr
- PubH 6123	Data Processing with PC-SAS	1 cr
- PubH 6325	Introduction to SAS Programming	1 cr
- PubH 6420	SAS Procedures and Data Analysis	3 cr
- PubH 6470	Planning & Budgeting in Public Health	2 cr
- PubH 6755	Managing Electronic Health Info	2 cr
- PubH 6813	Using Demographic Data for Policy Analysis	3 cr
- PubH 6845	Data Visualizing Data in R	1 cr
- PubH 7264	Exploring and Visualizing Data in R	2 cr
- PubH 7461		
PubH 6741	Ethics in Public Health: Professional Practice and Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 6901	Foundations of Public Health Nutrition Leadership	2 cr
PubH 7996	Applied Practice Experience	1-2 cr
PubH 7994	Integrative Learning Experience	1-2 cr
Program Core Requirements		
PubH 6914	Community Nutrition Intervention	3 cr
PubH 6915	Nutrition Assessment	2 cr
PubH 6933	Nutrition & Chronic Diseases	2 cr
Electives		
Public Health Nutrition	Students choose from a selection of 3 options	2-3 cr
Research Methods	Students choose from a selection of 16 options	4 cr
Remaining elective credits may be selected in consultation with the advisor to reach the 42 credit minimum. 11 cr		

Template D2-1: Public Health Practice

Requirements for MPH degree, Public Health Practice Concentration		
Course Number	Course Name	Credits
Public Health Core Requirements		•
PubH 6020	Fundamentals of Social & Behavioral Science	2 cr
PubH 6102	Issues in Environmental & Occupational Health	2 cr
PubH 6250	Foundations of Public Health	2 cr
PubH 6320 OR PubH 6341	Fundamentals of Epidemiology OR Epidemiologic Methods	3 cr
PubH 6414* OR	Biostatistical Literacy OR	3 cr OR
PubH 6450	Biostatistics I	4 cr
*Students who take PubH 6414 must also take one of the following courses: - PubH 6107 - PubH 6123 - PubH 6325 - PubH 6325 - PubH 6420 - PubH 6470 - PubH 6755 - PubH 6813 - PubH 6845 - PubH 7264 - PubH 7461	Excel and Access in Public Health Settings Violence Prevention & Control: Theory, Research, and Application Data Processing with PC-SAS Introduction to SAS Programming SAS Procedures and Data Analysis Planning & Budgeting in Public Health Managing Electronic Health Info Using Demographic Data for Policy Analysis Data Visualizing Data in R Exploring and Visualizing Data in R	1 cr 2 cr 1 cr 1 cr 3 cr 2 cr 2 cr 3 cr 1 cr 2 cr
PubH 6741	Ethics in Public Health: Professional Practice and Policy	1 cr
PubH 6751	Principles of Management in Health Services	2 cr
PubH 7294	Integrated Learning Experience	1-4 cr
PubH 7296	Applied Practice Experience	1-4 cr
Program Core Requirements		
To meet PHP Competency #1 students choose the		
following course:		
PubH 6711	Public Health Law	1 cr
To meet PHP Competency #2 students choose one of the following courses:		
PubH 7227 OR PubH 7262	Incident Management Systems: The Public Health Role OR Globalization and Health	1 cr

To meet PHP Competency #3 students choose one		
of the following courses:		
PubH 6060 OR PubH 7262	Motivational Interviewing: Strategies to Effect Behavior Change OR Globalization and Health	1 cr
To meet PHP Competency #4 students choose one		
of the following courses:		
PubH 7235 OR PubH 7253 OR PubH 7257	Surveillance of Zoonotic Pathogens in Animals OR Introduction to GIS OR Qualitative Data Analysis	1 cr
To meet PHP Competency #5 students choose one of the following courses:		
PubH 6060 OR PubH 7214 OR PubH 7227	Motivational Interviewing: Strategies to Effect Behavior Change OR Principles of Risk Communications OR Incident Management Systems: The Public Health Role	1 cr
Electives		
Remaining elective credits may be selected in consulta	tion with the advisor to reach the 42 credit minimum.	23 cr

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.

The full D2-2 tables (by program) can be found in the Electronic Resource File, Criterion D folder, D2.2 subfolder.

Template D2-2: MPH Curriculum

Assessment of Competencies for all MPH Students			
Competency	Course number(s) and name(s)	Specific assessment opportunity	
	Evidence-based Approaches to Public Health		
1. Apply epidemiological methods to the breadth of settings and situations in public	PubH 6320 - Fundamentals of Epidemiology OR PubH 6341 - Epidemiologic Methods I	PubH 6320: In written assignments and exams, students are expected to apply epidemiologic methods to contextualize health issues by identifying appropriate data sources, calculating and interpreting disease frequency and risk measures, while considering effects of confounding and bias. Students are also expected to apply appropriate epidemiologic methods to investigate infectious disease outbreaks, using	

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
health practice.		infectious disease models, and epidemic curves. PubH 6341: In class surveillance and person/place/time exercises, written assignment on person/place/time of disease distribution, public health data online exercise
2. Select quantitative and qualitative data collection methods appropriate for a given public health context.	PubH 6320 - Fundamentals of Epidemiology (quant & qual) PubH 6341 - Epidemiologic Methods I (quant & qual)	PubH 6320: In-class activities/online discussion forums, written assignments and exams evaluate students on classical quantitative methods; students select appropriate study designs and data collection methods for the question being addressed considering: the hierarchy of evidence, prevalence of outcomes and risk factors, and ethical considerations. In a written assignment in qualitative data collection, students must identify appropriate participants and questions for focus groups to describe a public health problem. PubH 6341: In-class activities, written assignments and exams require students to demonstrate knowledge of key epidemiological study designs and their strengths/weaknesses. Students make arguments in favor of or against, select study
		designs while balancing the desire for high validity against feasibility, ethics, costs and state-of-the science for a given scientific question under study. In a written assignment on qualitative data collection, students identify appropriate participants and questions for focus groups to describe a public health problem.
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer- based programming and software, as appropriate.	PubH 6320 - Fundamentals of Epidemiology (quantitative) PubH 6341 - Epidemiologic Methods I	PubH 6320: Given public health scenarios and data, students are expected to select, calculate, and interpret measures of frequency and association using classical biostatistical methods. For the Classical Method of qualitative analysis, students are asked about selecting the type of analysis needed for focus group interviews, being systematic, having a verifiable protocol, and determining priorities in analysis.
	(quantitative) PubH 6751 – Principles of Management in Health Services (qualitative)	PubH 6341: In-class activities and written assignments on quantitative data: measures of frequency, association and impact, and written assignments on excel standardization. For the Classical Method of qualitative analysis, students are asked about selecting the type of analysis needed for focus group interviews, being systematic, having a verifiable protocol, and determining priorities in analysis. PubH 6751: Students read background data on Covid response or opioid crisis and

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
		documents, and integrating codes into the fishbone diagram.
4. Interpret results of data analysis for public health research, policy or practice.	PubH 6320 - Fundamentals of Epidemiology PubH 6341 - Epidemiologic Methods I PubH 6414 - Biostatistical Literacy PubH 6450 - Biostatistics	 PubH 6320: In quizzes and assignments, students are given brief descriptions of epidemiologic studies with data, they are expected to select, calculate and interpret the appropriate measures of association. Students must also differentiate between causal and non-causal associations by applying causal models. Students need to articulate the difference between causes of disease in individuals versus populations. Given results, students characterize the weaknesses in study designs. PubH 6341: Written assignments interpreting study design examining measures of association, confounding, bias, and public health impact. PubH 6414: Weekly readiness quizzes assess preparedness for class discussions based on readings and lectures, and weekly end-of-unit quizzes assess understanding of the unit concepts including descriptive & graphical summaries, confidence intervals, hypothesis testing and regression. A programming course is required to accompany 6414 and students will have an opportunity to manipulate public health data using computer programming methods. PubH 6450: Comprehensive projects to assess ability to analyze epidemiologic and other data using software and interpret results.
	Public Heal	th & Health Care Systems
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings.	PubH 6250 - Foundations of Public Health PubH 6751 - Principles of Management in Health Services	PubH 6250: Assessed across graded discussions as well as group and independent activities. Students will: -participate in an Introduction Discussion in which they reflect on the primary functions of public health and their driving valuescomplete U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burdento draw comparisons and make conclusions about health systems across national and international settingscomplete the Content Quiz which includes three questions focused on this competency: 1) All of the following are among the five essential characteristics of public health law EXCEPT (multiple choice); 2) American Indian and Alaska Native tribes are subject to the same state public health laws as the general population (true/false); and 3) All of the following are examples of United

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
		States safety nets EXCEPT (multiple choice).PubH 6751: Self-assessment or in-class learning plan activity to define management and organizations, to identify the competencies for the management of health care and public health organizations, and to describe the diverse settings for public population health work.
		PubH 6751: Assignment 1 - self-assessment of management strengths, written essay addressing how student might operate/manage in a system. Assignment 3b - in groups, students prepare a budget presentation detailing how the US system operates to deliver health interventions under budget constraints, and how partnerships with local hospitals or community health centers align with spending goals/needs. Students are asked to apply VMOSA. In-class activity Week 2, students are asked to define, "collaborative public management, provide examples of hierarchical management and how they compare to collaborative public management" and asked to summarize from readings and lecture how Kazan suggests COVID strategies would have been improved if collaborative public management was used. In-class activity Week 5, students are confronted with supply chain issues and they are asked to comment and defend their statements with evidence from readings and lectures on the implications of supply chain failures for emergency preparedness as well as disaster response. Students read case studies the night before, then come to class and present these as examples of successful or failed responses based on organizations, communication, and collaboration - examples include international as well as domestic case studies.
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.	PubH 6250 - Foundations of Public Health PubH 6741 - Ethics in Public Health: Professional Practice and Policy	PubH 6250: Assessed across graded discussions as well as group and independent activities. Students will: -participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence participate in the Intersectionality and Public Health group learning activity in which students will gain understanding about the ways that intersectional experiences and identities affect health access and outcomes; discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; and speculate about opportunities that public health has to mitigate and remove barriers to health equitycompose and share an Advocacy for Equity Letter or Video in which they practice using their voice or writing to passionately communicate knowledge that influences the policy process by directly addressing a

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
		person of positional powerchoosing to focus on a topic from an instructor-provided list of recent public health policy issuescompose a Foundations of Public Health Op- Ed on any topic related to what they believe is needed in order for public health to achieve and advance health equity and improve health in diverse populations; students are supported to carefully craft a brief, well-edited, non-fiction product providing the opportunity to clarify foundational public health knowledge with evidence and passion.
		PubH 6741: Students complete an assignment (Assignment 2, "Ethical Analysis Discussion") where they analyze inequities in COVID-19 incidence, mortality, and impact and assess how concepts of social justice, structural racism, and other ethical principles illuminate how these inequities came to be, as well as how centering social justice and other ethical principles in program planning can be used to prospectively advance health equity in future pandemics. They also complete an assignment where they analyze the role of health equity in vaccine allocation planning and implementation in the context of COVID-19 and write a press release (Assignment 3, "Allocating a Scarce Coronavirus Vaccine") communicating to the public the rationale for and a proposed process for equitable vaccine allocation.
	Planning & Mar	nagement to Promote Health
7. Assess population needs, assets and capacities that affect communities' health.	PubH 6020 - Fundamentals of Social and Behavioral Science PubH 6050 - Community Health Theory and Practice I PubH 6901 - Foundations of Public Health Nutrition Leadership	PubH 6020: Create, describe, and implement a community needs assessment plan using techniques from course materials. Use information you gather about the community to draw an asset map that describes community needs, assets, and capacities or resources within the community or population that are relevant to your health topic and explain how these needs, assets, and capacities/resources can help promote change in the community.

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
		PubH 6050: Students develop draft conceptual models based on theories covered in weekly required readings; models help understand behavior and identify targets for health promotion programs and policies. Some conceptual models are in the context of small group activities during class. In addition to this, there are four individual draft conceptual model assignments that students complete on their own. The determinants of health that are selected for each assignment will correspond to population needs, assets, and capacities read about that week. Students determine the needs, assets, and capacities that are most relevant to the week's topic and population of interest. For these assignments, students are provided basic guidelines and an application scenario (e.g., applying Social Cognitive Theory to prevention of obesity or sexually transmitted infections). In addition to drawing the conceptual model, students are asked to provide 1-2 paragraphs of accompanying text to explain the model. PubH 6901: Small group worksheet and activity to transform traditional nutrition interventions into policy, strategy and environment (PSE) strategies and interventions, small group work to assess the appropriateness of existing programs/interventions for 3 SES status groups.
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.	PubH 6050 - Community Health Theory and Practice I PubH 6250 - Foundations of Public Health PubH 6741 - Ethics in Public Health: Professional Practice and Policy	PubH 6050: This class focuses on how students can work in partnership with communities with cultural sensitivity and competence. Students complete a variety of readings and two assignments that correspond to this competency. Assignment #1: Schedule 1 – DCM Assignment #2 – Cultural Adaptation of Evidence-Based Programs Assignment #2: Schedule 2 – DCM Assignment #3 – Community Organization and Community Building.

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
		PubH 6250: Assessed through group and independent activities. Students will: - compose and share an Advocacy for Equity Letter or Video in which they practice using their voice or writing to passionately communicate knowledge that influences the policy process by directly addressing a person of positional power and then reflecting upon their own consideration and application of cultural values and practices complete the Our Connected World Discussion group learning activity in which students will apply and demonstrate their understanding of the impacts of globalization on population health as well as the interconnectedness of human, animal, and environmental health, completing and sharing a table in which they identify public health interventions at each level of prevention. They discuss how they would consider and ensure the application of cultural knowledge and preferences at each stage: 1) the design of the approach; 2) the implementation of the approach; and 3) the communication of the approach design, implementation, evaluation, and outcomes. Additionally, they respond to two peers by articulating how similar or different their described approaches to cultural values and practices were. PubH 6741: Students complete a final paper (Assignment 6, "Final Ethics Analysis", 30% of grade) in which they complete an ethics analysis of a topic in public health policy or practice. One part of the assignment prompt is to "identify the ethical considerations that emerge from the issue, based on your analysis of what principles/values the stakeholders on all sides might offer". This component of describing the cultural values and ethical principles is worth 4 points (out of 30), and students also must recommend a course of action that is consistent with the values and principles they describe.

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
9. Design a population- based policy, program, project or intervention.	PubH 6020 - Fundamentals of Social and Behavioral Science PubH 6050 - Community Health Theory and Practice I PubH 6901 – Foundations in Public Health Nutrition Leadership	 PubH 6020: In group case study activities and written assignments students demonstrate an understanding of psychosocial theories, community engagement and economics/policy implications. Develop intervention campaigns or programs based on theoretical models of behavior change, as applied to specific populations of interest. PubH 6050: The group final project will consist of two components: (1) a 2-page policy and program brief that makes the case for a multilevel intervention to address both structural and social determinants of a specific health behavior/outcome among a specific population, and (2) a corresponding presentation. PubH 6901: Students will work in small groups to develop a policy brief. Groups should think about how they would distribute their policy brief and determine a target audience(s) and method for distribution. Small group activity to transform traditional nutrition interventions into PSE strategies and interventions and activity to identify appropriate behavioral economic strategies for specific public health nutrition scenarios, followed by discussion of ethics of stealth and behavioral interventions.
10. Explain basic principles and tools of budget and resource management.	PubH 6751 - Principles of Management in Health Services	PubH 6751: Assignment 3a is an assessment of students' use of a budget template, community tool kit, and HP 2030 objectives using a power-point presentation with submitted budget template. Please find supplemental information in the ERF.
11. Select methods to evaluate public health programs.	PubH 6320 - Fundamentals of Epidemiology PubH 6341 - Epidemiologic Methods I	PubH 6320: In Week 9, students are asked to explain the advantages and disadvantages of various study designs with regard to types of exposure including interventions, programs and policies. PubH 6341: In class exercises on measures of frequency, association and impact, written assignment on measures of association and impact.
Policy in Public Health		
12. Discuss multiple	PubH 6741 - Ethics in Public Health:	PubH 6741: Students demonstrate an understanding of the multi-dimensionality of

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
dimensions of the policy-making process, including the roles of ethics and evidence.	Professional Practice and Policy	policy making and the role of ethics in policymaking via discussion forums on insurance benefit design (ungraded) and on COVID-19 inequities in which they articulate the ethical concepts that underlie resource allocation and policy response (e.g., utilitarianism, liberty, justice, etc.). Students write a press release (Assignment 3, "Allocating a Scarce Coronavirus Vaccine") on vaccine shortages with an allocation plan and discussion of the role that ethics plays in the plan. Written responses to class readings demonstrate a critical understanding of the posted topic and how ethics relates in local public health practice. Students' final assignment ("Final Ethics Analysis," 30% of grade) involves writing an ethical analysis of a public health topic.
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.	PubH 6020 - Fundamentals of Social and Behavioral Science PubH 6050 - Community Health Theory and Practice I PubH 6741 - Ethics in Public Health: Professional Practice and Policy	 PubH 6020: Assignments assess students ability to apply community organizing techniques to area of concern in public health. PubH 6050: The group final project will consist of two components: (1) a 2-page policy and program brief that makes the case for a multilevel intervention to address both structural and social determinants of a specific health behavior/outcome among a specific population, and (2) a corresponding presentation. Students prepare the brief and presentation for an (imagined) audience of policy makers. In addition, individually completed draft conceptual model assignments require students to think of intervention strategies that involve the identification of stakeholders and the building of partnerships and coalitions to promote health in diverse communities. PubH 6741: In-class students participate in a small group legislative debate activity where they are assigned a stakeholder role, and online students participate in discussions in which they are assigned a stakeholder role and argue a position on a public health policy issue from that perspective (Assignment 4 - "Smoking in Cars Stakeholder Posts"). In the final paper ("Final Ethics Analysis"), students are asked to identify key stakeholders in public health issues, describe how the values of diverse groups shape the design and implementation of public health policies, and make a recommendation based on the range of stakeholders' values represented.
14. Advocate for political, social, or economic policies and programs that will	PubH 6020 – Fundamentals of Social & Behavioral Science PubH 6050 - Community Health Theory and	PubH 6020: Students complete Case Study Activity 2 and Concept Applications 2 & 3. PubH 6050: In groups, students draft a Policy and Program Brief designed for an audience of policy makers. Students propose a multi-level intervention to address both

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
improve health in diverse populations.	Practice I	structural and social determinants of health, and an accompanying presentation.
	PubH 6250 - Foundations of Public Health	PubH 6250: Assessed across graded discussions as well as group and independent activities. Students will: -compose and share an Advocacy for Equity Letter or Video in
	PubH 6741 - Ethics in Public Health:	which they practice using their voice or writing to passionately communicate
	Professional Practice and Policy	knowledge that influences the policy process by directly addressing a person of positional powerchoosing to focus on a topic from an instructor-provided list of recent
	PubH 6901 - Foundations of Public Health	public health policy issuescompose a Foundations of Public Health Op-Ed on any
		advance health equity and improve health in diverse populations; students are supported to carefully craft a brief, well-edited, non-fiction product providing the opportunity to clarify foundational public health knowledge with evidence and passion.
		PubH 6741: Students participate in discussion forums/small group activities and in-
		support successful development of and implementation of interventions to improve population health and advance health equity. Online students address population health and health equity in discussion forum assignments.
		PubH 6901: Small group activity to identify a public health nutrition problem, locate and evaluate relevant policy, write and present policy brief to primary and secondary audiences, social media strategy to disseminate brief should also be identified for each audience.
15. Evaluate policies for their impact on public health and health equity.	PubH 6741 - Ethics in Public Health: Professional Practice and Policy	PubH 6741: In a reflection post (Assignment 2), students are asked to evaluate the ethical principles that underlie U.S. pandemic response and COVID-19 inequities, and offer their perspectives on an action plan that would promote health equity. In their final paper (Final Ethics Analysis), students write an ethical analysis of a public health topic, and they make a recommendation (supported by their ethical analysis) of which of several policy options will best promote health and advance health equity.
		Leadership

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
16. Apply principles of leadership, governance, and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.	PubH 6751 - Principles of Management in Health Services	PubH 6751: Through written assignments, in class exercises and online forums, students will identify differences between operational and strategic planning. Develop vision, mission, values statements along with a strategic plan for an organization. Identify opportunities for performance evaluation at individual work unit program and organizational level. Create a plan for continued learning of management and leadership skills.
17. Apply negotiation and mediation skills to address organizational or community challenges.	PubH 6751 - Principles of Management in Health Services	PubH 6751: Through written assignments, in class discussion and online forums, students will apply methods and demonstrate an understanding of mediation and negotiation skills through descriptions of personal conflict management style and exercises as to how to use conflict constructively. In Week 6 we focus entirely on conflict resolution and mediation as both leadership and management skills to effectively guide teamwork and culture. These skills are assess both in an in-class activity and summative assessment.
	C	ommunication
18. Select communication strategies for different audiences and sectors.	PubH 6751 - Principles of Management in Health Services	PubH 6751: In Week 2, students complete a management strategy essay as a group. They must make decisions on what's important and demonstrate why they are important, and make a comparison between two types of strategies and use evidence to demonstrate effectiveness of one or the other. In Week 8 students are asked to engage in conversations in-class around the pandemic messaging process, how the messages change across platforms, and how the messaging might be influenced by politics or other stakeholders outside public health.
19. Communicate audience-appropriate public health content, both in writing and through oral	PubH 6102 - Issues in Environmental and Occupational Health PubH 6741 - Ethics in Public Health: Professional Practice and Policy	PubH 6102 (in-person): In-class students must individually write a Public Service Announcement educating the public about an area of food safety/nutrition, and a tweet informing an audience of choice about the transmission routes and environmental cause(s)/concern(s) of an infectious disease. Students in the online class work in groups to develop a strategic communication plan. Students must choose an environmental health goal, and through a series of graded assignments, profile their

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
presentation.		target audiences, develop key messages for their target audiences, and develop a soundbite. The students must demonstrate their ability to create written and oral audience-appropriate messages that address an important public health issue. PubH 6741: Students complete weekly graded discussion forums in which they apply and communicate ethical frameworks to resolve public health ethical dilemmas. One such assignment is a group project in which students complete a reflection on the ethical principles they view as most important to vaccine allocation, the differences across the values with which they approach the task, and then collectively complete a press release communicating the rationale for equitable vaccine allocation to the public. All students in the group receive the same grade. Students also participate in a stakeholder exercise where they hold a legislative debate about a policy topic (most recently, restrictions on cars with children present) and either orally (in-person sections) or through discussion posts (online sections) advocate for their assigned stakeholder identity, and they are assessed on their persuasive argument as well as their personal reflection on their position after the stakeholder discussion. Finally, students complete a final written paper that is an ethical analysis of a public health topic that includes the identification of ethical dilemmas, recognition of stakeholders, description of ethical principles and a framework, and identification of strategies/interventions to address a public health problem.
20. Describe the importance of cultural competence in communicating public health content.	PubH 6020 - Fundamentals of Social & Behavioral Science PubH 6050 - Community Health Theory and Practice I PubH 6250 - Foundations of Public Health PubH 6901 - Foundations of Public Health Nutrition Leadership	 PubH 6020: Apply theories to explain flu vaccination in a specific population and address how to tailor communication to meet social and cultural needs. PubH 6050: This class focuses on how students can work in partnership with communities with cultural sensitivity and competence. Students complete a variety of readings and two assignments that correspond to this competency. Assignment #1: Schedule 1 – DCM Assignment #2 – Cultural Adaptation of Evidence-Based Programs Assignment #2: Schedule 2 – DCM Assignment #3 – Community Organization and Community Building. PubH 6250: Assessed through graded discussion and group activities. Students will: - participate in the Health Communication group learning activity in which they review a published public health Op-Ed and evaluate whether or not it achieved the basic, expected components of this writing style; students will analyze the types and quality of evidence provided as well as whether or not there is a demonstrated understanding

Assessment of Competencies for all MPH Students		
Competency	Course number(s) and name(s)	Specific assessment opportunity
		of the sociocultural, historical, and/or political context surrounding the topic(s). PubH 6901: Small group activity to identify a PHN problem, locate and evaluate relevant policy, write and present policy brief to primary and secondary audiences, social media strategy to disseminate brief should also be identified for each audience, small group work to assess appropriateness of existing programs/interventions for 3 groups (based on SES status), small group work to utilize existing literacy and numeracy tools to assess existing nutrition/health education materials and to revise as needed. Cultural competency is taught throughout all of assessment activities, and not just in one activity. Students run all of the materials they identify as part of the interventions they choose for activities (PSE, SDH, etc) through the CDC's Clear Communications Scoresheet, as well as use the CDC Clear Communication Index and widget so that they have experience accessing and using that during all aspects of the policy brief development.
	Interpr	rofessional Practice
21. Perform effectively on interprofessional teams.	PubH 6102- Issues in Environmental and Occupational Health	PubH 6102: A detailed description of the assignment that assesses this competency is included in the ERF. For both the in-person and the online offering of PubH 6102 this is a substantial multi-part assignment. It is the capstone project for the in-person offering of PubH 6102 and one of two major projects for the online offering of PubH 6102. Both projects required extensive in depth work on the part of the student and require them to integrate and synthesize topics that they have studied throughout the course.
	Sy	stems Thinking
22. Apply systems thinking tools to a public health issue.	PubH 6102 - Issues in Environmental and Occupational Health	PubH 6102 (in-person): In-class students are asked to design a water supply for a rural village where the water must be carried from the source to the home by hand. PubH 6102 (online): Students apply systems thinking to recognize the complex interactions in a public health challenge through an individual assignment where an environmental health case study is analyzed, and then a map created that illustrates the links and interactions between the components of the systems that drive the issue. Students also identify components in the systems that are potential points for intervention strategies. This project is accomplished by students completing a series of
Assessment of Competencies for all MPH Students		
---	------------------------------	---
Competency	Course number(s) and name(s)	Specific assessment opportunity
		four assignments throughout the course.

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.

Syllabi and supporting documentation for all courses listed as part of the MPH curriculums can be found in the Electronic Resource File, Criterion D folder, within the D2.3 subfolder, organized by course.

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

Strengths

- The MPH foundational competencies are embedded in a set of courses required for our MPH students. We offer these courses in multiple semesters each academic year, all online, and some also in person, thus efficiently ensuring students can access the courses and be assessed in foundational competencies.
- A subcommittee of our education and policy committee reviews evaluations for these required courses to ensure quality and effectiveness.

Weaknesses

• Our core required courses total 16 credits, which, combined with the credits required for the Applied Practice Experience and the Integrative Learning Experience, comprise more than 40% of the 42 required credits for an MPH. Depending on the MPH program, this can limit the number of electives students can afford to take (MPH students pay by the credit).

D3. DrPH Foundational Competencies (SPH and PHP, if applicable)

Not Applicable

D4. MPH & DrPH Concentration Competencies

The school defines at least five distinct competencies for each concentration or generalist degree at each degree level in addition to those listed in Criterion D2 or D3.

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

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

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

Below are the competencies to the following MPH programs:

- Community Health Promotion
- Environmental Health
- Epidemiology
- Public Health Administration & Policy
- Public Health Data Science
- Public Health Nutrition
- Public Health Practice

The full D4-1 tables can be found in the Electronic Resource File, Criterion D folder, D4,1 subfolder.

Template D4-1: Community Health Promotion

Assessment of Competencies for MPH in Community Health Promotion Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
	Theories and Conc	eptual Models	
1. Apply theories to the development	PubH 6051 - Community Health Promotion	PubH 6051: Students complete a series of assignments throughout the	
of effective public health programs	II: Developing, Implementing, and Justifying	course of the semester focused on a public health problem and a related	
and policies.	Interventions	behavioral area. First, students must identify and provide evidence for the	
		selection of a target population. Students list and justify short- and long-term	
		goals and intervention objectives for a proposed public health intervention	
		and write a brief description of likely intervention components to support a	
		change in behavior related to the chosen public health problem.	
2. Create effective theory-based	PubH 6051 - Community Health Promotion	PubH 6051: Written assignment where students must describe the	
conceptual models to guide	II: Developing, Implementing, and Justifying	epidemiological basis for a selected public health problem and behavior,	
intervention development.	Interventions	justification for targeting this problem and behavior, and key determinants of	
		the targeted behavior. A conceptual model of the most important	
		determinants (i.e., risk and protective factors) of the targeted behavior should	
		be developed, discussed, and referred to in the main text of the paper.	
	Critical An	alysis	
3. Ground proposals in prior work by	PubH 6051 - Community Health Promotion	PubH 6051: Students complete a series of assignments throughout the	
critically reviewing the existing	II: Developing, Implementing, and Justifying	course of the semester focused on a public health problem and a related	
research literature to identify	Interventions	behavioral area. First, students must identify and provide evidence for the	
individual and environmental-level		selection of a target population. Students list and justify short- and long-term	
factors that can be changed to		goals and intervention objectives for a proposed public health intervention	
address significant public health		and write a brief description of likely intervention components to support a	
issues.		change in behavior related to the chosen public health problem.	
4. Critically assess existing	PubH 6034 - Evaluation I: Concepts	PubH 6034: Students will critique a real-world evaluation report in a class	
interventions, evaluations, and/or		workshop session and then as a brief written document, to increase	
public health organizations.	PubH 6852 - Program Evaluation in Health	understanding of standard sections included in evaluation reports, as well as	
	and Mental Health Settings	identify ways to improve these reports. In another workshop, students will	
		critique an assessment report conducted by the Minnesota Department of	
		Health. This workshop allows students to discuss what an assessment is,	
		strengths and limitations of an assessment, and practice using a method to	
		prioritize issues identified through an assessment.	

As	sessment of Competencies for MPH in Con	nmunity Health Promotion Concentration
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
		PubH 6852: In order to become thoughtful, yet critical, consumers of
		evaluation research students are asked to search the scholarly literature for a
		published evaluation study and write a short paper; briefly summarize the
		type of evaluation conducted, evaluation question(s), study design, and data
		collection method(s) used. Students must also provide a thoughtful critique of
		the evaluation, drawing on course concepts when appropriate.
	Intervention De	velopment
5. Develop implementation plans for	PubH 6051 - Community Health Promotion	PubH 6051: Building on earlier assignments, students prepare an
public health interventions, including	II: Developing, Implementing, and Justifying	implementation plan, timeline, budget, and budget justification for an
timelines, budgets, and resource	Interventions	intervention in order to meet proposed goals developed in previous
requirements.		assignments. All sections are then subject to thorough peer review by
		classmates where students learn how to not only critically examine the work
		of others, but also how to receive critique and feedback, incorporating
		important new ideas to strengthen their own work.
6. Develop intervention materials to	PubH 6045 - Skills for Policy Development	PubH 6045: Develop fact sheet and other written materials for legislators and
use for public health programs and		media that describes key components and provides rational for one state-
policies.	PubH 6078 - Policy as a Public Health	level public health policy issue.
	Prevention Strategy	
		PubH 6078: Students must select a local, state, or federal public health
		problem and related prevention policy of interest and develop talking points
		that could be used in advocating for policy change with elected officials.
		Students must clearly define the problem and justify why a policy approach is
		necessary for reducing the problem, as well as describe and justify the
		mechanism of how the policy will create change.
	Community Engagement in Interv	vention and Evaluation Work
7. Plan engagement and how to use	PubH 6051 - Community Health Promotion	PubH 6051: Building on earlier assignments, students prepare an
ongoing feedback from targeted	II: Developing, Implementing, and Justifying	implementation plan, timeline, budget, and budget justification for an
communities and other stakeholders	Interventions	intervention in order to meet proposed goals developed in previous
during intervention development and		assignments. All sections are then subject to thorough peer review by
implementation.		classmates where students learn how to not only critically examine the work
		of others, but also how to receive critique and feedback, incorporating
		important new ideas to strengthen their own work.

Assessment of Competencies for MPH in Community Health Promotion Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
8. Plan engagement and how to use	PubH 6034 - Evaluation I: Concepts	PubH 6034: Students will include a section on stakeholder engagement in	
ongoing feedback from targeted		their small-group evaluation proposal presentation.	
communities and other stakeholders	PubH 6852 - Program Evaluation in Health		
during evaluation development and	and Mental Health Settings	PubH 6852: Through a series of written assignments, students select an	
implementation.		existing public health program of interest and work to design a complete	
		evaluation of that program; the first step of this development is for students to	
		thoroughly analyze and describe the program and conduct a stakeholder	
		analysis.	
	Assessment and	d Evaluation	
9. Develop and critique appropriate	PubH 6034 - Evaluation I: Concepts	PubH 6034: Students will be assigned to small groups that will work as teams	
content and tools for assessment in		to develop a comprehensive evaluation proposal that will be "pitched" to	
formative, process, and outcome	PubH 6852 - Program Evaluation in Health	potential clients. Each team will develop and present a plan that includes	
evaluations.	and Mental Health Settings	plans for formative, process, and outcome evaluations. Proposals will be	
		presented and critiqued in class presentations sessions.	
	PubH 6035 - Evaluation II: Applications		
		PubH 6852: In the culmination of a series of previous written assignments,	
		students revise their evaluation study design of an existing public health	
		program. Students must clearly define a problem statement and objective of	
		the evaluation, describe the program and evaluation design, develop a logic	
		model, describe sampling, data collection methodology, and any associated	
		strengths and weaknesses of the evaluation.	
		PubH 6035: Students complete lab exercises that walk them through data	
		analyses using Stata. Lab exercises include techniques for data cleaning and	
		statistical modeling approaches that are commonly used in intervention and	
		evaluation projects. Students also complete a final assignment in small-	
		groups where they determine a research question relevant to a public health	
		need or problem, then find and analyze real-world data to answer their	
		research question using techniques learned from the labs.	
10. Conduct data analyses to	PubH 6035 - Evaluation II: Applications	PubH 6035: Students complete lab exercises that walk them through data	
determine intervention needs and		analyses using Stata. Lab exercises include techniques for data cleaning and	
evaluate effects.		statistical modeling approaches that are commonly used in intervention and	

As	sessment of Competencies for MPH in Con	nmunity Health Promotion Concentration
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
		evaluation projects. Students also complete a final assignment in small- groups where they determine a research question relevant to a public health need or problem, then find and analyze real-world data to answer their research question using techniques learned from the labs.
11. Develop evaluation protocols and data collection plans.	PubH 6034 - Evaluation I: Concepts PubH 6852 - Program Evaluation in Health and Mental Health Settings	PubH 6034: During this workshop, students will work in small groups to develop a protocol and data collection instruments for three types of data collection (online survey, interviews, observations) that will include qualitative and quantitative measures.
		PubH 6852: Students design an evaluation study of an existing public health program where they must clearly define the question and objective, describe the study design, sampling methodology, and describe any associated strengths and weaknesses of the evaluation.
	Logic Model and Grant Pr	oposal Development
12. Develop logic models as part of intervention development and/or evaluations of public health	PubH 6034 - Evaluation I: Concepts PubH 6852 - Program Evaluation in Health	PubH 6034: Students will work in small groups to discuss what logic models are, compare logic models to effect theory models, develop a logic model, and critique an imperfect logic model. The workshop will help students gain a
interventions.	and Mental Health Settings	better understanding of logic models and the skills and confidence to develop logic models.
		evaluation.
13. Develop effective grant proposals	PubH 6051 - Community Health Promotion	PubH 6051: As the culmination of earlier assignments, students develop a
to apply for funding to support public	II: Developing, Implementing, and Justifying	full grant proposal asking funders to support the implementation and
health interventions and/or	Interventions	evaluation of an intervention to a public health problem. Included in the
evaluations.		proposal is background information and a description of the significance of a
		chosen public health problem, a description of the behavior change
		intervention, its goals and objectives, and implementation and evaluation
		plans. Students participate in peer review.

Template D4-1: Environmental Health Science

Please note: Some students in environmental health sciences focus on industrial hygiene (IH). The IH curriculum has additional requirements to meet the accreditation standards of the Accreditation Board for Engineering and Technology (ABET) accrediting body. IH is a sub-plan within EnHS. A sub-plan is a formally designated, distinct content area within a single, broader discipline (e.g., program or concentration) that appears on the official University transcript. For example, the transcript for a student focusing on IH will indicate both the program (EnHS) and the sub-plan (industrial hygiene).

Assessment of Competencies for MPH in Environmental Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Evaluate hazards in various	PubH 6120 - Injury Prevention in	PubH 6120: Development and presentation of policy brief which addresses an injury
environments.	the Workplace, Community and Home	problem and presents policy approaches to prevention.
		PubH 6140: Hazard identification is covered as a lecture topic; students discuss various
	PubH 6140 - Environmental and	hazards and choose one hazard they will investigate as a course Individual Project
	Occupational Epidemiology	(description found in the syllabus).
	PubH 6159 - Principles of	PubH 6159: Hazards of chemical exposure are assessed through a research paper and oral
	Toxicology I	presentation where students evaluate the properties, pharmacokinetic characteristics,
		metabolic pathways, and factors affecting toxicological properties of a chosen chemical.
	PubH 6181 - Surveillance of	
	Foodborne Illnesses and Food	PubH 6181: Assignments require students to analyze data from foodborne disease outbreak
	Safety Hazards	reports. This work includes recognizing infectious disease hazards in various environments.
2. Analyze factors that influence	PubH 6140 - Environmental and	PubH 6140: Students determine causal pathways and various factors that affect existing
the presence and magnitude of hazards.	Occupational Epidemiology	hazards through their assignment and peer discussion.
	PubH 6141 - GIS and Spatial	PubH 6141: Students explore how to map and identify potential environmental and
	Analysis	sociodemographic factors that impact exposures. An air pollution case study explores environmental conditions (roads, population density, etc.) that may explain air pollution
	PubH 6150 - Interdisciplinary	variability.
	Evaluation of Occupational Health	
	& Safety Field Problems	PubH 6150: Student groups focus on analyzing factors such as industry sectors,
		occupations, and demographics to identify the presence and magnitudes of hazards and
	PubH 6159 - Principles of	priority needs areas an occupational health and safety problem that impacts multiple
	Toxicology I	industries and companies. Students give oral presentations in which each member of the team presents their own work; they receive a grade for the report and separately, for the

Assessment of Competencies for MPH in Environmental Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
	PubH 6161 - Regulatory	presentation. For individual assessments in the group project, students are asked to provide
	Toxicology	a description of how each student in the group contributed to the report.
	PubH 6182 - Emerging Infectious Diseases PubH 6192 - Measurement and	PubH 6159: In a research paper and presentation, students evaluate factors that influence the harmful properties of a chemical including an evaluation of the chemical properties, pharmacokinetic characteristics, metabolic pathways, and factors affecting toxicological properties of a chosen chemical.
	Properties of Air Contaminants	
		PubH 6161: Students explore how to identify variables that have an impact on the description and measurement of exposures, and investigate the factors that may influence the assessment of the risk posed by these exposures. Several examples of safety and risk assessments are analyzed in class and these variables are analyzed in the contexts of the studies analyzed. Finally a safety assessment is prepared by the students to test their ability to frame and use the analytical tools developed in class and test their ability to identify and address all the variables influencing these assessments.
		PubH 6182: Students read and discuss assigned material, including relevant articles and comprehensive reports, on a weekly basis, which each highlight emerging infectious diseases and detail their challenges. Students analyze and describe the causes and trends of infectious diseases via essay-based midterms (in ERF) and final exams (not yet drafted) that require students to draw on key concepts covered in their assigned readings and group discussions.
		PubH 6192: Specific written assignments and the final exam can be found in the ERF; these assignments are ones that particularly include performing calculations related to the influence of environmental conditions on exposures.
3. Identify pathways of	PubH 6140 - Environmental and	PubH 6140: Students assess causal pathways and the relation among an exposure of
exposure to environmental	Occupational Epidemiology	interest, confounders, effect modifiers and a hazard they determined for their course project.
hazards.		Student discuss their own pathways with peer and instructor.
	PubH 6141 - GIS and Spatial	
	Analysis	PubH 6141: Students examine how to acquire and explore environmental hazards (power
		plants, roadways, etc.), map hazards and identify if hotspots relate to community
	PubH 6150 - Interdisciplinary	characteristics or health data.

Assessment of Competencies for MPH in Environmental Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
	Evaluation of Occupational Health	
	& Safety Field Problems	PubH 6150: Student groups will focus on an occupational health and safety problem that
		impacts multiple industries and companies. Assessment process includes consultation with
	PubH 6159 - Principles of	external stakeholders, conducting research and making recommendations. The written
	I oxicology I	assignments will be collated into a single report that will be delivered to DLI.
	PubH 6181 - Surveillance of	PubH 6159: Through a research paper and presentation, students describe how humans are
	Foodborne Illnesses and Food	exposed to a specific chemical, describe how the chemical is metabolized, and how
	Safety Hazards	metabolic pathways influence the levels of the chemical in the body and, consequently, its harmful effects.
	PubH 6182 - Emerging Infectious	
	Diseases	PubH 6181: Assignments require students to analyze data from foodborne disease outbreak reports. This work includes identifying various exposure pathways of infectious disease
	PubH 6193 - Advanced Topics in	hazards.
	Human Exposure Science	
		PubH 6182: Students read and discuss assigned material, including relevant articles and
		comprehensive reports, on a weekly basis, which each highlight emerging infectious
		diseases and detail their challenges. Students identify pathways of exposure to infectious
		disease threats via essay-based midterms and final exams (not yet drafted) that require
		sudents to draw on key concepts covered in their assigned readings and group discussions.
		PubH 6193: Students write a final paper that requires reading a series of papers that present
		diverging views on a topic. The papers that the students analyze center around the
		pathways of exposure to environmental hazards and their associated health risks. The
		written report is required to describe key issues under debate, the scientific rationale behind
		the main arguments, strengths and weaknesses of each side's arguments, and a
		presentation of their own stands on the issues. Students must also give a ten minute oral
1 Integrate expecture and	Dubli 6112 Environmental Health	presentation and facilitate a class discussion.
4. Integrate exposure and	Risk Assessment: Application to	health risk assessment and management through a written assignment and oral
investigate health risk and	Human Health Risks from	presentation to MnTAP, an outreach program that assists businesses in developing and
inequity	Exposure to Chemicals	implementing industry-tailored solutions to prevent pollution. This project includes the
		application of risk assessment methods, evaluation of potential chemical harm to humans,

Assessment of Competencies for MPH in Environmental Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
	PubH 6123 - Violence Prevention	recommendations to MnTAP for the least hazardous solvent, along with a comprehensive
	and Control: Theory, Research	justification for the recommendation.
	and Control	
		PubH 6123: Analysis of a public health dataset (Assignment 3), an oral presentation (Final
	PubH 6130 - Occupational &	Paper & Presentation), and completion of a draft manuscript (Final Paper & Presentation).
	Environmental Medicine	
		PubH 6130: Participation in moderated class discussions based upon lecture presentations
	Pubh 6140 - Environmental and	and assigned readings of environmental exposures, nealth effects, and risk. These graded
		integrating this new knowledge into risk and inequity investigations. Midterm and final example
	PubH 6141 - GIS and Spatial	are also assessment tools for this competency
	Analysis	
	·	PubH 6140: Data identification, collection, and preparation for analysis are discussed and
	PubH 6159 - Principles of	students determine the best approaches on their own topic and discuss with peer and
	Toxicology I	instructor as an assignment.
	PubH 6181 - Surveillance of	PubH 6141: A case study and related assignment on how to create and evaluate place-
	Foodborne Illnesses and Food	based characteristics and community inequities, which can impact vaccination rates among
	Safety Hazards	school children. The case study introduces the concept of environmental justice, the
		application of spatial data to identify vulnerable and at-risk populations, the use of spatial
		odds ratios to quantify variation in risk, and provides students the opportunity to perform
		their own evaluation.
		PubH 6159: In a written research paper and oral presentation, students describe how
		various factors affect chemical exposure and the risks associated with the exposure.
		PubH 6181: Assignments require students to analyze data from foodborne disease outbreak
		reports. This work includes recognizing infectious disease hazards in various environments.
5. Propose risk management	PubH 6112 - Environmental Health	PubH 6112: Students learn basic processes and fundamental steps involved in conducting a
strategies, such as education,	Risk Assessment: Application to	health risk assessment and management through a written assignment and oral
policy, and technology, directed	Human Health Risks from	presentation to MnTAP, an outreach program that assists businesses in developing and
toward environmental health	Exposure to Chemicals	implementing industry-tailored solutions to prevent pollution. This project includes the
stakeholders, including		application of risk assessment methods, evaluation of potential chemical harm to humans,

Assessment of Competencies for MPH in Environmental Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
government, industry, and	PubH 6120 - Injury Prevention in	recommendations to MnTAP for the least hazardous solvent, along with a comprehensive
community groups.	the Workplace, Community and Home	justification for the recommendation.
		PubH 6120: Development and presentation of policy brief which addresses an injury
	PubH 6161 - Regulatory Toxicology	problem and presents policy approaches to prevention.
		PubH 6161: Students are asked to present an example of agency or institute of reference for
	PubH 6174 - Control of Workplace	regulatory toxicology and analyze the role of this agency in the production of guidelines and
	Exposure	current role in the regulatory framework will be summarized by the student and presented to
	PubH 6182 - Emerging Infectious	the class. The various factors impacting these guidelines and rules are explored and
	Diseases: Current Issues, Policies,	examined in a number of assignments to be completed ever the course of the class, where
	and Controversies	the student is asked to summarize and critique presentations given by various professional
		experts of regulatory toxicology and risk assessment topics relevant to governmental
		agencies and industries focusing on the productions of consumer products, food, chemicals
		and medical devices. In the Final Assessment, students produce a final safety assessment
		on an exposure of interest and compile an evaluation of the level of hazard and risk deriving
		from the exposure, where the students will complete their work with a safety assessment on
		an exposure of choice. This document will include the compilation and synthesis of
		information on the exposure levels, the toxicity information on mechanistic studies and
		epidemiologic studies focusing on the effects on health of the exposure and some
		conclusion on safety guidelines developed in light of the information collected. The purpose
		of the Assessment is to document the acquisition of knowledge on the process that is
		followed to gather information on the safety of exposure and to produce recommendations
		for the population. Students will choose a topic of interest at the beginning of the class. The
		final report includes a section in which the student formulates a recommendation of actions
		or policies that will allow for protection of relevant users or populations facing the exposure
		analyzed. This final section is required to analyze any gap of knowledge and any relevant
		area in which the lack of scientific evidence limits the ability to produce robust evaluations
		and therefore more research is required. Finally, as part of the commentary to this second
		part of the final assignment, the student is asked to identify any population, industry and
		relevant regulatory agency who may be impacted by their assessment and analyze the
		complexities of the various repercussions their assessment may have on these different

Assessment of Competencies for MPH in Environmental Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
		stakeholders.
		PubH 6174: Ten homework assignments; Two take-home exams serve as both qualitative and quantitative assessments of course material. And a design project allows students to demonstrate their knowledge by integrating control concepts and apply them to a problem modeled on a real workplace. The project requires designing technology (hoods and duct systems, selection of fans and air pollution control equipment), and an economic analysis.
		PubH 6182: Students participate in weekly written assignments, class presentations and discussions where they are responsible for researching a topical news media article and present action plans to address a complex infectious disease, examining both the science and policy challenges facing the world. Students also propose mitigation strategies for infectious disease threats via essay-based midterms and final exams (not yet drafted) that require students to draw on key concepts covered in their assigned readings and group discussions.

Template D4-1: Epidemiology

	Assessment of Competencies for MPH in Epidemiology Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Develop epidemiologic research questions and formulate testable hypotheses	PubH 6342 - Epi Methods 2	PubH 6342: Students conduct a secondary data analysis of the predictors or consequences of short sleep duration from the National Health Interview Survey (NHIS), and write a formal research report summarizing the findings. Students select a relevant exposure and/or	
that are grounded in the published public health literature and informed by an understanding of		outcome, select the study population, define the variables, and consider potential confounders. Students submit a preliminary analysis plan, a draft to peers for feedback, and a final project report.	
pathophysiology and public health impact.			
2. Using data from public databases or other data	PubH 6350 - Epi Methods 3 Lab	PubH 6350: As part of their secondary data analysis project, students identify a dataset relevant to their research question. Most select a publicly-available dataset from a source	
sources, rigorously analyze the distribution of public health-		such as NHANES, NHIS, BRFSS, or SEER. The first step in analysis to generate basic descriptive statistics to characterize their exposure or outcome according to	
relevant exposures and outcomes to characterize them		sociodemographic variables or other factors.	
by person, place, and time. 3. Develop and implement	PubH 6343 - Epi Methods 3	PubH 6343: In both their lectures and homeworks, students are asked to follow logical	
data management and analysis		modeling building concepts as well as to decide if the analytic approach is more appropriate for etiologic or prediction models. They learn how to select variables to retain in those	
procedures which are		models and also to determine the best way to model their exposures and outcomes	
epidemiologic study design that		(dichotomous, categorical, continuous, transformed, etc.).	
is being employed.	Dubl 6242 Eni Mathada 2	Public 6242: Assessed in cross sectional case control, and schort studios with linear	
as well as potential sources of confounding and bias in epidemiologic study data and	Fubir 0343 - Epi Methous 3	logistic, log-binomial, Cox, and Poisson regression. Specifically, students are presented with data from observational cohort studies both in lecture and in homeworks. As part of their homeworks, they take the understanding of the theory of effect modification and confounding	
reports in order to draw appropriate conclusions.		from lecture, and perform calculations to determine if these measures are present in the data they have been provided.	

5. Interpret epidemiologic research findings to determine the implications for disease prevention and control.	PubH 6342 - Epi Methods 2	PubH 6342: Students conduct a secondary data analysis of the predictors or consequences of short sleep duration from the National Health Interview Survey (NHIS), and write a formal research report summarizing the findings. Students select a relevant exposure and/or outcome, select the study population, define the variables, and consider potential confounders. Students submit a preliminary analysis plan, a draft to peers for feedback, and a final project report.
 Prepare written, oral, and/or visual reports that communicate complex epidemiologic information or concepts to lay and professional audiences, including other epidemiologists. 	PubH 6350 - Epi Methods 3 Lab	PubH 6350: Students prepare slides and deliver an oral presentation on the results of their secondary data analysis project. The audience is made up of fellow students and faculty instructors. They also prepare an abstract describing the results in a format appropriate for a peer-reviewed publication, and a lay summary appropriate for the general public.

Template D4-1: Maternal & Child Health

Assessment of Competencies for MPH in Maternal & Child Health Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Appraise & prioritize important health	PubH 6630 - Foundations of MCH	PubH 6630: Data exploration exercises using National Survey of Children's	
issues for specific MCH populations,	Leadership	Health and PRAMS databases where students select and analyze data.	
including place, race, and status			
disparities in health and wellness.	PubH 6034 - Evaluation	PubH 6034: Students critique an assessment report conducted by the	
		Minnesota Department of Health and discuss what an assessment is,	
	PubH 6673 - Grant Writing for Public	strengths and limitations of an assessment, and practice using a method to	
	Health	prioritize issues identified through an assessment.	
	PubH 6852 - Program Evaluation in	PubH 6673: For Assignment 2, students prepare the Needs Statement	
	Health and Mental Health Settings	section of a grant proposal clarifying how need relates to agency purpose;	
		describe what the need is and why it occurs, with relevant citations; describe	
		consequences for not meeting the need. Create a planning committee,	
		identifying members and reasons for including.	
		PubH 6852: Assess the utility of government data for a program evaluation by	
		analyzing its strengths and limitations. Determine whether the data could be	

Assessment of Competencies for MPH in Maternal & Child Health Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
		used to answer the evaluation question provided.	
2. Analyze the role of social	PubH 6630 - Foundations of MCH	PubH 6630: Based on course case study readings, students complete two	
determinants of health & how they	Leadership	written assignments where social determinants and health disparities are	
contribute to health disparities in		examined within the context of MCH. For the first paper, students must	
women, infants, children, adolescents,		articulate a comprehensive understanding of MCH theoretical perspectives,	
and/or pregnant & parenting families.		specifically socioecological and family health perspectives through the	
		lifecourse, and develop indicators of child physical, mental and social health;	
		the second, students must apply program evaluation principles to a case	
		study.	
3. Analyze & select appropriate	PubH 6673 - Grant Writing for Public	PubH 6673: For Assignment 4, students are asked to write the Methods and	
evidence-based guidelines for newborn,	Health	Evaluation section of a grant proposal.	
child, adolescent, maternal, paternal			
reproductive, and women's health,			
including Title V programs.			
4. Integrate elements of the life course	PubH 6630 - Foundations of MCH	PubH 6630: Based on course case study readings, students complete a	
health development framework in	Leadership	written assignment articulating a comprehensive understanding of MCH	
programs and policies.		theoretical perspectives, specifically socioecological and family health	
		perspectives through the lifecourse, and develop indicators of child physical,	
		mental and social well being.	
5. Apply family-centered philosophical	PubH 6630 - Foundations of MCH	PubH 6630: Based on course case study readings, students complete a	
constructs to critique practices,	Leadership	written assignment articulating a comprehensive understanding of MCH	
programs, or policies that affect MCH		theoretical perspectives, specifically socioecological and family health	
population groups, including children		perspectives through the lifecourse, and develop indicators of child physical,	
and youth with special health care		mental and social well being. Students also complete a rapid literature review	
needs (CYSHCN).		of MCH policies, programs, or topic of interest, synthesizing literature and	
		translating findings into MCH recommendations.	
6. Formulate an important MCH	PubH 6630 - Foundations of MCH	PubH 6630: Students complete a rapid literature review of MCH policies,	
practice, research or policy question	Leadership	programs, or topic of interest, synthesizing literature and translating findings	
based on scientific literature to present a		into MCH recommendations.	
rationale for MCH policies and	PubH 6673 - Grant Writing for Public		
programs.	Health	PubH 6673: For Assignment 1, students must choose and describe a non-	
		profit agency for a proposal writing simulation activity. Research, identify and	
	PubH 6852 - Program Evaluation in	document two philanthropic funding agencies that fit with chosen agency's	

Assessment of Competencies for MPH in Maternal & Child Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
	Health and Mental Health Settings	mission, target audience, programs, and geography. For Assignment 2, students prepare the Needs Statement section of a grant proposal clarifying how need relates to agency purpose; describing what the need is and why it occurs, with relevant citations; describing consequences for not meeting need. Create a planning committee, identifying members and reasons for including.
		PubH 6852: Describe the importance, magnitude, and scope of a public health problem of interest and describe an existing MCH program or policy that was designed to address that problem. As part of this assingment, students must conduct a stakeholder analysis for the chosen MCH program or policy.
7. Develop, edit, or use surveys, questionnaires, indicators, or other qualitative or quantitative tools to help assess MCH population needs or evaluate the effectiveness of an existing program for specific MCH population groups.	PubH 6034 - Evaluation PubH 6673 - Grant Writing for Public Health PubH 6852 - Program Evaluation in Health and Mental Health Settings	 PubH 6034: Over the course of two workshop exercises students work together to develop protocols and data collection instruments, and implement these protocols for varying types of data collection (online survey, interviews, observations) that will include both quantitative and qualitative measures. Students must then compare and contrast the different types of data. PubH 6673: Assignment 4 asks students to write the Methods and Evaluation section of the proposal. PubH 6852: Students write a paper describing an evaluation design including: question(s), evaluation objective(s), study design, and sampling methodology, including its associated strengths and limitations. In a second assignment, students describe a data collection plan, stating the data collection method(s) used and an explanation describing its appropriateness for primary data collection. This assignment must also include a draft copy of the data
		collection instrument; for secondary data, students provide a detailed description of the dataset used.
8. Develop a grant proposal targeted to federal, state, local or philanthropic grant sources to support MCH interventions, programs or research.	PubH 6673 - Grant Writing for Public Health	PubH 6673: Assignment 1: Choose and describe non-profit agency for proposal writing simulation activity. Research, identify and document two philanthropic funding agencies that fit with chosen agency's mission, target audience, programs, and geography. Assignment 2: Prepare the Needs

Assessment of Competencies for MPH in Maternal & Child Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
		Statement section of a grant proposal clarifying how need relates to agency
		purpose; describing what the need is and why it occurs, with relevant
		citations; describing consequences for not meeting need. Create a planning
		committee, identifying members and reasons for including. Assignment 3:
		Prepare Goals and related Objectives for proposal that provide a clear picture
		of the results from implementing your Program. Assignment 4: Write the
		Methods and Evaluation section of the proposal. Assignment 5: Develop a
		program budget and budget justification, reflecting expenses related to the
		proposed program. Prepare a Sustainability Plan that defines future funding
		strategies. Assignment 6: Prepare a brief proposal introduction that motivates
		the reader. Write a 1-page abstract of the proposal. Assignment 7: Prepare a
		complete 10-page proposal, accompanied by a logic model.
9. Analyze ethical issues faced by MCH	PubH 6630 - Foundations of MCH	PubH 6630: Based on course case study readings, students complete two
populations in different settings,	Leadership	written assignments where social determinants and health disparities are
including clinical care, community based		examined in the context of MCH. For the first paper, students must articulate
settings, research, or public health		a comprehensive understanding of MCH theoretical perspectives, specifically
practice.		socioecological and family health perspectives through the lifecourse, and
		develop indicators of child physical, mental and social health; the second,
		students must apply program evaluation principles to a case study.
10. Develop communication tools for	PubH 6630 - Foundations of MCH	PubH 6630: Students dissect the Minnesota Women's Health Report Card
programs and policies for diverse	Leadership	both individually and in groups, investigate updates, identify gaps and make
audiences.		recommendations based on their research. Recommendations are then
		presented orally to the class where students must present data visually, as
		well as submit in written form. In a case study, students are asked to envision
		themselves in the role of Title V Director for a border state health department
		and write about the social, physical, and mental health needs of children at
		the border. Students determine baseline data needs and develop indicators,
		including justification for and potential sources of data for each health domain.
11. Conduct an environmental scan or	PubH 6630 - Foundations of MCH	PubH 6630: Students dissect the Minnesota Women's Health Report Card
other community needs assessment to	Leadership	both individually and in groups, investigate updates, identify gaps and make
identify systems, stakeholders,		recommendations based on their research. Recommendations are then
programs, practices or other features	PubH 6034 - Evaluation	presented orally to the class where students must present data visually, as
that impact the health of MCH		well as submit in written form. In a case study, students are asked to envision

Assessment of Competencies for MPH in Maternal & Child Health Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
populations in a given location.	PubH 6852 - Program Evaluation in	themselves in the role of Title V Director for a border state health department
	Health and Mental Health Settings	and write about the social, physical, and mental health needs of children at
		the border. Students determine baseline data needs and develop indicators,
	PubH 6673 - Grant Writing for Public Health	including justification for and potential sources of data for each health domain.
		PubH 6034: Through a series of workshop exercises, students practice the
		main components of evaluation, including assessment, formative evaluation,
		process evaluation, and outcome evaluation. Students begin by critiquing an
		assessment report, moving on to prioritizing issues identified in an
		assessment, developing plans for pretesting and pilot testing intervention and
		evaluation materials, planning process evaluations for different types of
		interventions, and ultimately planning an outcome evaluation.
		PubH 6852: Select a public health problem of interest and develop a needs
		assessment logic model that outlines the personal determinants,
		environmental determinants, external determinants, behavioral factors, and
		environmental factors contributing to it, as applicable.
		PubH 6673: Assignment 2: Prepare the Needs Statement section of a grant
		proposal clarifying how need relates to agency purpose; describing what the
		need is and why it occurs, with relevant citations; describing consequences
		for not meeting need. Create a planning committee, identifying members and
		reasons for including.
12. Identify and analyze factors that	PubH 6034 - Evaluation	PubH 6034: In small groups, students work as teams to develop
facilitate implementation of evidence-		comprehensive evaluation proposals that will be "pitched" to potential clients.
based programs in MCH or otherwise	PubH 6673 - Grant Writing for Public	Each team will develop and present a plan that includes plans for formative,
assist in MCH program implementation.	Health	process, and outcome evaluations. Proposals should also include a logic
		model, timeline, and brief overview of staffing needs. Students are expected
	Public 6852 - Program Evaluation in	to describe plans for engaging the community and other stakeholders in
	nealth and Mental Health Settings	
		PubH 6673: Assignment 4: Write the Methods and Evaluation section of the
		proposal.

Assessment of Competencies for MPH in Maternal & Child Health Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
		PubH 6852: Students are given a program description and asked to develop a process evaluation using the information provided. Specifically, they are asked to develop evaluation questions, write performance standards, specify their study design, and describe how they would collect various pieces of information.	

Template D4-1: Public Health Administration & Policy

Assessment of Competencies for MPH in Public Health Administration & Policy Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Apply an understanding of the	PubH 6724 - Health Systems and	PubH 6724: Multiple assessments are used to document the student's fulfillment of	
principles of healthcare delivery	Public Health (PHAP and E-PHAP)	this complex competency, two examples follow. Based on course readings,	
systems to current public health policy		students write an essay where they identify and critically examine what they	
and administration.		determine to be the four greatest challenges faced by the current U.S. healthcare	
		system(s), and provide opinions on how to effectively, and equitably, address these	
		challenges. In another assessment, students develop a PowerPoint presentation or	
		draft a white paper with 4 objectives: (1) explore in depth one of the many current	
		issues or challenges in U.S. health care delivery and public health; (2) develop	
		analytic rigor in the identification and presentation of concepts and facts about	
		health care delivery and public health; (3) develop a clear expression of concepts	
		and facts about health care delivery and public health; (4) develop skills in creating	
		an informative, clear, professional white paper.	
2. Develop management and	PubH 6727 - Health Leadership and	PubH 6727 and 7740:	
leadership skills for public and	Managing Change	1. Read and review a popular management-related book	
population health care programs,		2. Analyze organizational failure through in class discussion of target articles,	
organizations, and systems.	PubH 7740 - Leadership and	formatted analysis of case studies, and discussion board postings.	
	Change (E-PHAP)	3. Specify parameters of a contracted service by writing a Request for Proposals	
		which must include variables such as goals, scope of work, deliverables, timeline	
		and budget.	
		4. Develop a business continuity plan for use in an emergency.	
		5. Apply conflict management skills to organizational conflict scenarios in class	

Assessn	Assessment of Competencies for MPH in Public Health Administration & Policy Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ		
		break-out sessions and group assignment		
		6. Demonstrate decision making skills using a prioritization matrix.		
		7. Develop their own personal management/leadership plan that will guide their		
		future professional role and leadership style. This plan must consider conflict		
		management, emergency operations, personal accomplishments/failures, and		
		considerations of their future professional goals.		
3. Apply high quality, scientifically	PubH 6806 - Principles of Public	PubH 6806: Assignment 3. Topic paper/literature review; Assignment 4. Mixed		
rigorous research to address problems	Health Research (PHAP)	methods quiz; Assignment 5. Methods section of proposal; Assignment 6. Critique		
in public health policy and		of Evaluation article; Assignment 7. Critique of Implementation Science article;		
administration.	PubH 7720 - Data to Drive Public Health (E-PHAP)	Assignment 8. Final full proposal; Assignment 9. Proposal peer review		
		PubH 7720: Through a policy brief assignment, students utilize data to identify a		
		problem(s) in a Minnesota county and then evaluate available studies /		
		interventions to identify the best fit. For a policy analysis assignment, students		
		utilize a conceptual model for policy analysis (the Bardach method) that leads		
		through eight steps of conducting a full policy analysis, which includes the		
		incorporation and evaluation of research and evaluation studies.		
4. Develop and analyze public health	PubH 6735 - Principles of Health	PubH 6735: Assignment 2 asks students to write an issue brief to communicate the		
policy.	Policy (E-PHAP and PHAP)	magnitude, significance, and urgency of a policy problem. In Assignment 5,		
		students write a policy proposal that analyzes potential solutions to complex health		
		policy challenges and presents a clearly-justified, feasible and appropriate		
		recommendation to a policy audience.		
5. Analyze and dismantle	PubH 6727 - Leadership and	PubH 6727: Identify an example of structural racism in an organization in which the		
organizational policies & practices that	Managing Change (PHAP)	student has worked and through online discussion boards, design an anti-racist		
perpetuate racism & inequity.		process and plan for implementation.		
	PubH 7740 - Leadership and			
	Change (E-PHAP)	PubH 7740: Identify an example of structural racism in an organization in which the		
		student has worked and through online discussion boards, design an anti-racist		
		process and plan for implementation.		

Template D4-1: Public Health Data Science

Assessment of Competencies for MPH in Public Health Data Science			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Apply appropriate coding practices,	PubH 7461 – Exploring & Visualizing	PubH 7461: In a final project, students apply the R statistical programming	
and use at least one statistical	Data in R	language to present numerical and graphical summaries of a dataset of their	
programming language to manipulate,		choice. Students are assessed on the relevance and quality of their summaries, as	
visualize and analyze data.		well as the organization and documentation of the code that produced it.	
2. Develop robust, reproducible, and	PubH 7462 – Building Data Analysis	PubH 7462: In a final project, students develop an "end-to-end" data analysis	
automated pipelines for processing and	Pipelines for Public Health	pipeline that includes automated data importing, cleaning, processing, and	
presenting data relevant to public		reporting steps. Pipelines are assessed on their usefulness, quality, robustness,	
health.		and completeness of documentation.	
3. Select and carry out common data	PubH 6451 – Biostatistics II	PubH 6451: Through weekly homework assignments, students conduct analyses of	
analysis methods, including exploratory		real data using the range of statistical techniques listed in the competency. A	
data analysis, descriptive statistics,		collaborative key model is employed wherein students evaluate and build upon	
estimation (point and interval),		each other's approaches. Instructors and teaching assistants evaluate and provide	
hypothesis testing, regression methods		feedback on solutions using rubrics which score appropriateness of the chosen	
for continuous, categorical, and		method of analysis and correctness of its application to data.	
censored data, and non-parametric			
and resampling/re-randomization			
methods.			
4. Implement and assess the	PubH 7463 – Fundamentals of	PubH 7463: In a final project, students will develop a machine learning-based	
performance of models for predicting	Prediction and Machine Learning for	prediction model using provided training data. The developed models will	
outcomes using public health data.	Public Health	"compete" in a Kaggle-type competition that will assess model performance on	
		unseen validation data. Projects will be assessed on model performance in the	
		competition and documented rigor of the process used to build the model.	
5. Interpret the outputs of data	PubH 7465 – Biostatistics	PubH 7465: Students participate in weekly consulting sessions with health	
analyses and prediction models and	Consulting	researchers from across the University's Academic Health Center. Students provide	
communicate them to non-statisticians.		consulting in groups of two and are supervised by a faculty member, with students	
	PubH 7496 – Applied Practice	taking an increased leadership in these sessions as the semester progresses.	
	Experience	Students are expected to: 1.) review problem descriptions from investigators and	
		arriving prepared to consulting sessions (e.g., completing tasks/analyses	
		determined at a previous consulting session), 2.) participate in the discussion	
		during the consulting session with investigators and 3.) participate in class	
		discussions of consults. Written summary reports are made by each student for	

Assessment of Competencies for MPH in Public Health Data Science			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
		each consulting session they attend. These reports include a brief summary of the	
		background and scientific/statistical questions, a summary of the discussion during	
		the consulting session, and an indication of what is to be done as follow-up both by	
		the client and by the statisticians. Reports are assessed on their completeness,	
		reasonableness of the proposed statistical approach, and clarity of presentation of	
		results and guidance.	

Template D4-1: Public Health Nutrition

Assessment of Competencies for MPH in Public Health Nutrition Concentration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
Area 1: Develop, Adapt, and/or Implement Poli	cy or Programmatic Intervention	s or Services that Address Significant Public Health Nutrition Issues	
1. Apply theoretical and/or skill-based	PubH 6933 - Nutrition and	PubH 6933: The student will understand and describe bias in the scientific	
knowledge of nutrition science needed for PHN	Chronic Disease	literature and elsewhere (even personal bias).	
practice.			
2. Apply current, evidence based best practices	PubH 6915 - Nutrition	PubH 6915: In 3 assignments, students demonstrate best practices for	
for dietary, biochemical and/or anthropometric	Assessment	assessment of dietary, biochemical, and anthropometric status and compare	
methods for assessing nutritional status.		alternative approaches to achieve specific objectives in diverse populations,	
		including advantages vs. disadvantages, validity and reliability, and	
		feasibility for the different methods in research and clinical practice.	
3. Utilize scientific literature effectively and	PubH 6933 - Nutrition and	PubH 6933: The student demonstrate their ability to interpret results from	
efficiently by understanding how to locate,	Chronic Disease	public health research, policy and practice through literature searches of	
access and use reliable resources for evidence-		reliable resources.	
based diet and nutrition information.			
5. Identify the components of effective nutrition	PubH 6933 - Nutrition and	PubH 6933: The student will be able to communicate nutrition and health	
messaging from a public health perspective,	Chronic Disease	information in an accurate and clear manner to a variety of audiences and	
including how nutrition messaging strategies may		through various channels.	
vary by target population or community			
demographics.			
7. Evaluate how social determinants of health	PubH 6914 - Community Nutrition	PubH 6914: Students will understand theoretical models on factors that	
affect the nutritional status of individuals and/or	Intervention	influence eating behaviors, including 'barriers' that prevent healthy	
populations, including their contribution to		behaviors, strengths and limitations of a selected behavioral model that	

Assessment of Competencies for MPH in Public Health Nutrition Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
disparities in nutrition-relevant health outcomes.		captures behavior patterns, and how the model might suggest opportunities
		for behavior change. This is a written assignment designed to demystify
		theoretical models of health behavior and to understand their usefulness in
		explaining factors that influence eating or activity behaviors.
8. Design and implement a needs assessment to	PubH 6914 - Community Nutrition	PubH 6914: Students will design and conduct a needs assessment, based
inform the development of a nutrition or physical	Intervention	on a population of interest, prior to the development of a nutrition
activity program or policy, systems or		intervention.
environmental intervention.		
9. Develop theory-informed goals, objectives,	PubH 6914 - Community Nutrition	PubH 6914: Develop clear theory-based objectives for a nutrition
and implementation plans for the design of a	Intervention	intervention; select and describe appropriate strategies for nutrition
nutrition or physical activity program or policy,		interventions.
systems or environmental intervention.		
10. Prepare a budget for the development and	PubH 6914 - Community Nutrition	PubH 6914: Assignment to prepare a budget for development and
evaluation of a nutrition or physical activity	Intervention	evaluation of a nutrition intervention.
intervention.		
Area 2: Develop and/or Implement a Needs As	sessment or Evaluation of Policy	or Programmatic Interventions or Services that Address Significant
Public Health Nutrition Issues		
1. Apply theoretical and/or skill-based knowledge	PubH 6914 - Community Nutrition	PubH 6914: Students will evaluate the process and impact of a nutrition
of nutrition science needed for PHN practice.	Intervention	intervention.
2. Apply current, evidence based best practices	PubH 6915 - Nutrition	PubH 6915: To apply the current evidence of evaluating nutritional status
for dietary, biochemical and/or anthropometric	Assessment	using various or combination of diet, biomarker, and anthropometric
methods for assessing nutritional status.		assessment methods in hypothetical research and clinical situations (final
		exam - see PubH 6915 doc in Section D folder of the ERF).
4. Understand evidence-based dietary guidelines	PubH 6933 - Nutrition and	PubH 6933: The student will develop evidenced-based public health
and nutrition recommendations issued to the	Chronic Disease	nutrition messages using social media and in oral presentations.
public in the US and utilize them to develop		
nutrition communications and/or guide applied		
PHN practice.		
5. Identify the components of effective nutrition	PubH 6933 - Nutrition and	PubH 6933: The student will develop bias-free and audience-appropriate
messaging from a public health perspective,	Chronic Disease	public health nutrition messages using social media and in oral
including how nutrition messaging strategies may		presentations.
vary by target population or community		

Assessme	nt of Competencies for MPH in P	ublic Health Nutrition Concentration
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
demographics.		

Assessme	ent of Competencies for MPH in P	ublic Health Practice Concentration
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Identify the rationale and key steps for policy	PubH 6711 - Public Health Law	PubH 6711: Through group exercises students will review varied policies
development: assessment, planning,		pertaining to health including individual and public health rights, privacy,
implementing, advocacy and evaluation.		immunization requirements, and registries. Written midterm & final exams
		will assess student retention.
2. Develop skills in systemic thinking and	PubH 7214 - Principles of Risk	PubH 7214: Through group and individual exercises students are reminded
understand how systems are connected and	Communications	of key concepts. This includes daily application exercises in small groups to
interdependent, and understand the potential		identify the audience, map key messages, justify communication
consequences that systems may have on	PubH 7227 - Incident Management	approaches, and practice in the media laboratory.
communities.	Systems: The Public Health Role	
		PubH 7227: Will use discussion, small and large group discussion and
	PubH 7262 - Globalization and	exercises. Nightly homework will cement daily concepts. A final tabletop
	Health	discussion exercise will demonstrate components of communication,
		leadership, and chain of command structure.
		PubH 7262: Through group and class discussion address global health
		social determinants of health, sustainable development goals. Cementing
		concepts will be done with case-based exercises in food security, pandemic
		response, and use of microcredits.
3. Explain the effects of policies, programs,	PubH 6060 - Motivational	PubH 6060: Through small groups and role playing students will identify
community-based interventions that promote	Interviewing: Strategies to Effect	motivational interviewing techniques, developing planning strategies and
improving health for different populations in	Behavior Change	tools, and practice skills to demonstrate competencies in motivational
communities.		interviewing. This will be re-emphasized with daily assessment quizzes.
	PubH 7262 - Globalization and	
	Health	PubH 7262: Through group and class discussion address global health
		social determinants of health, sustainable development goals. Cementing
		concepts will be done with case-based exercises in food security, pandemic

Template D4-1: Public Health Practice

Assessment of Competencies for MPH in Public Health Practice Concentration		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
		response, and use of microcredits.
4. Demonstrate how to turn data into information	PubH 7235 - Surveillance of	PubH 7235: Through group project and individual journal evaluation.
and action to influence public health policies and	Zoonotic Pathogens in Animals	Graded online journal entries, group presentation focused on surveillance
programs.		and prevention/control of zoonotic pathogen of ruminants and humans will
	PubH 7253 - Introduction to GIS	assess student understanding of key concepts.
	PubH 7257 - Qualitative Data	PubH 7253: Individual computer exercises to demonstrate experience and
	Analysis	a group GIS project that answers a specific spatial research question.
		PubH 7257: Data coding assignment where students identify a coding
		strategy, develop a code book and definitions, and organize it into
		categories; students must provide a summary of coding results. Students
		also write an analysis section of a research grant proposal.
5. Demonstrate how data and information is	PubH 6060 - Motivational	PubH 6060: Through small groups and role playing students will identify
developed and conveyed to different audiences	Interviewing: Strategies to Effect	motivational interviewing techniques, developing planning strategies and
(professionals and the public) using a variety of	Behavior Change	tools, and practice skills to demonstrate competencies in motivational
media approaches.		interviewing. This will be re-emphasized with daily assessment quizzes.
	PubH 7227 - Incident Management	
	Systems: The Public Health Role	PubH 7227: Will use discussion, small and large group discussion and
		exercises. Nightly homework will cement daily concepts. A final tabletop
		discussion exercise will demonstrate components of communication,
		leadership, and chain of command structure.

Public Health Practice

Please find an example proposal as well as example sample plans of study for dual degree students in the Electronic Resource File, Criterion D folder, D4.2 subfolder.

The PHP program, as part of its strategic planning process, will convene the affiliated faculty to develop three courses that address public health practice needs. Courses will reflect areas of interest for public health practice students who tend already be in the workforce and are looking to develop tools focused on population health needs.

Regarding the dual degree programs, where the MPH is in public health practice, we recognize the need for students enrolled in the dual degree programs to have individually defined concentration courses. Given the broad interest and diversity of students from varied programs, as part of its PHP strategic planning process, affiliated faculty will work to develop three courses that specifically address public health practice needs.

All transfer credits from programs within the University of Minnesota are reviewed and agreed upon at the time of the creation of the dual degree program. Courses are reviewed to ensure that they contain public health instruction as they are applied to the MPH program. Joint Degree MPH transfer courses are vetted, reviewed, and approved by the PHP program director often in conjunction with adjunct faculty from the supporting institution. A syllabus is requested that demonstrates addressing public health competencies. Individual courses that reflect individual medical approaches are not accepted. Courses considered as transfer credits should address population measures for disease control, recognition of health disparities, or evaluation of the impacts of health interventions. These would be from accredited medical, dental, pharmacy or nursing programs. These are professional level courses from accredited programs or other graduate level courses and contain significant public health content (at least 50%). In order to be utilized as a transfer course, a grade of B- or above in an A/F course or S in an S/N course, must be achieved. These courses are transferred as elective MPH credits. Any core course transfers would need approval from SPH faculty in those disciplines.

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.

Not applicable.

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.

Syllabi and supporting documentation for all courses listed as part of the MPH program curricula can be found in the Electronic Resource File, Criterion D folder, within the D4.3 subfolder.

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

Strengths

• Each program has thoughtfully developed important competencies for their areas as well as high-quality courses through which students can learn and be assessed on those competencies. Some programs established their competencies to align with guidelines from appropriate national organizations in their specific areas.

Weaknesses

• None.

D5. MPH Applied Practice Experiences

MPH students demonstrate competency attainment through applied practice experiences.

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

The school assesses each student's competency attainment in practical and applied settings through a portfolio approach, which demonstrates and allows assessment of competency attainment. It must include at least two products. Examples include written assignments, projects, videos, multi-media presentations, spreadsheets, websites, posters, photos or other digital artifacts of learning. Materials may be produced and maintained (either by the school or by individual students) in any physical or electronic form chosen by the school.

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

The Applied Practice Experience (APEx) provides a hands-on opportunity for students to use their public health knowledge and skills in real-world settings, under the supervision of a preceptor. SPH is experienced and well-positioned to support students toward successful and meaningful experiences.

Briefly, SPH tracks and documents the application and assessment of competencies during APEx through an online module. Through this module, students can access all eligible foundational and program-specific competencies 24/7 from almost any location around the world. Students document the competencies to be practiced along with other details of the APEx (e.g., dates, hours, practice site, summary of expectations). Upon completion of APEx, students upload relevant products through the online module, which also serves as a repository. The preceptor and student each submit evaluations of the APEx and application of the competencies through the online module, which the advisor reviews.

Faculty advisers help guide students to identify an applied practice site. SPH provides students with a large database of recent APEx preceptors and sites; as of March 30 2021, 240 sites had either hosted or been in conversations with SPH students about APEx. Students can also refer to the Career and Professional Center for guidance on resume development and interview skills to prepare them for their placement.

Once the APEx site has been identified, the SPH delineates six stages of completion for APEx requirements.

- 1. Selection of competencies
- 2. Entry of administrative information
- 3. Registration for APEx course
- 4. Practicum
- 5. Evaluation
- 6. Grading of APEx course

Selection of competencies

When they first log into the online module, students complete a competency assessment tool (CAT) to help them select the five competencies (at least 3 foundational) they will practice at their site. Faculty

advisers can also help guide students through the selection of competences during the experience. Advisors emphasize the importance of students having clear discussions with preceptors about expectations, competencies to be practiced, and the specific products that will result from the applied practice experience. Students typically apply all five competencies through one APEx, but they do have the option of completing more than one APEx with different competencies applied through different experiences.

Entry of administrative information

After students select competencies, they enter administrative information through the online module, including the following: student contact information, program enrollment information, expected start and end dates, academic advisor name, international travel and agency site information (necessary only if the experience is international), preceptor name, course registration information, and competencies. The online module is approved and electronically signed by the student, preceptor, academic advisor, and program coordinator.

Registration for APEx course

Once the online module has been approved by all necessary parties, the student is given a permission number to register for an APEx course, PubH 7X96 Applied Practice, [program] where X designates the program the student is in (e.g., PubH 7196 Applied Practice Experience, Environmental Health Sciences for students in the Environmental Health Sciences program).

Typically students register for 1-2 APEx credits. However, with some of the PHP programs, a pre-agreed upon number of Applied Practice credits (and ILE credits) with our allied health partner programs (i.e. pharmacy, doctor of nurse practitioner, and preventive medicine/aerospace residency) pushes the number of credits above what is typical for other MPH programs. These credit requirements were established during the initial memorandum of understanding when establishing these programs. For example:

- **Pharmacy** Phar 7XXX, Advanced Pharmacy Practice Experience (Public Health Focus, year 4), 4 credits
- Nursing Nurs 69XX, Health Equity and Social Justice Practicum, 2 credits
- Mayo Clinic Preventive Medicine and Occupational & Aerospace Medicine Fellowship programs Students who are in the fellowship program at the Mayo Clinic typically use their practice for both their applied practice and integrative learning experience. They will take a minimum of four credits for each, for a maximum of eight credits. This is determined between their Mayo Clinic advisor and our program director based on the experience and products. These students are asked to prepare a manuscript for publication in a peer-reviewed journal.

Practicum

The student proceeds with the APEx, which includes applying the five competencies and developing at least two products that benefit the APEx site.

Evaluation

When the student has completed the APEx, they upload the products to the online module and complete the student evaluation. Next, the preceptor completes an evaluation of the student and their application of each competency, as well as their products. Finally, the advisor reviews the evaluations and products.

Grading of APEx course

If the advisor is satisfied that the student successfully applied the competencies and demonstrated the application through the products, they give the student a satisfactory grade for the APEx course.

The Applied Practice website provides extensive information for students, faculty, program coordinators, and preceptors on the requirements for the Applied Practice, the process for identifying a practice site, and other pertinent information through the online learning module: https://www.sph.umn.edu/current/applied-practice/

Moreover, the applied practice coordinator, employed full-time in SPH, provides information to students during orientation, at program specific APEx informational sessions throughout the year, and in individual meetings by request. The applied practice coordinator maintains the information listed on the APEx webpage and creates tools to clarify the process and timeline for students and preceptors. The applied practice coordinators for any APEx-related questions and training, and maintains (and serves as a business analyst for) the APEx online module, alongside the UMN health sciences technology department. Together, the coordinator and technology team troubleshoot various technical issues from coding errors to access difficulties to user errors, and provide support accordingly.

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

Both program guidebooks and syllabi spell out APEx requirements for students. See the Electronic Resource File, Criterion D folder, within the D5.2 subfolder for the examples of APEx syllabi and guidebooks. Students, advisors, preceptors, and program coordinators can also find requirements on the Applied Practice website: <u>https://www.sph.umn.edu/current/applied-practice/</u>

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 (i.e., 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.

See the full D5-1 table in the Electronic Resource File, Criterion D folder, D5.3 subfolder.

Student 1 in Community Health Promotion Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Contact tracing infographics, news analysis presentation,	FDN 4. Interpret results of data analysis for public health research, policy or practice.	
key informant interview guide, contact tracing	FDN 7. Assess population needs, assets and capacities that affect communities' health.	
communication study protocol.	FDN 18. Select communication strategies for different audiences and sectors.	
	CHP 10. Conduct data analyses to determine intervention needs and evaluate effects.	
	CHP 11. Develop evaluation protocols and data collection plans.	
Student 2 in Community Health Promotion Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Implementation plan, training manual.	FDN 9. Design a population-based policy, program, project or intervention.	
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
	FDN 21. Perform effectively on interprofessional [^] teams.	

Template D5-1: Practice-based products that demonstrate MPH competency achievement

	CHP 5. Develop implementation plans for public health interventions,
	CHP 7. Plan angegrament and how to use angeing feedback from
	CHP 7. Plan engagement and now to use ongoing recuback from
	development and implementation
Student 3 in Community Hea	Ith Promotion Concentration
Specific products in	
portfolio that demonstrate	Competency as defined in Criteria D2 and D4*
application or practice [^]	
Survey, logic model,	FDN 6. Discuss the means by which structural bias, social inequities and
presentation.	racism undermine health and create challenges to achieving health
	equity at organizational, community and societal levels.
	FDN 19. Communicate audience-appropriate public health content, both
	in writing and through oral presentation.
	FDN 21. Perform effectively on interprofessional [^] teams.
	CHP 9. Develop and critique appropriate content and tools for
	assessment in formative, process, and outcome evaluations.
	CHP 10. Conduct data analyses to determine intervention needs and
	evaluate effects.
Student 4 in Community Hea	Ith Promotion Concentration
Specific products in	
portfolio that demonstrate	Competency as defined in Criteria D2 and D4*
application or practice [^]	
Student handout, recruitment	FDN 9. Design a population-based policy, program, project or
presentation, facilitator	intervention.
manual, 6 lessons	FDN 13. Propose strategies to identify stakeholders and build coalitions
	and partnerships for influencing public health outcomes.
	FDN 14. Advocate for political, social or economic policies and programs
	that will improve health in diverse populations.
	CHP 5. Develop implementation plans for public health interventions,
	Including timelines, budgets, and resource requirements.
	CHP 7. Plan engagement and how to use ongoing feedback from
	targeted communities and other stakeholders during intervention
	development and implementation.
Student 5 in Community Hea	ith Promotion Concentration
Specific products in	
portfolio that demonstrate	Competency as defined in Criteria D2 and D4*
application or practice [^]	
Policy brief, presentation,	FDN 6. Discuss the means by which structural bias, social inequities and
inclusive educational policy	racism undermine health and create challenges to achieving health
document	equity at organizational, community and societal levels.
	FDN 9. Design a population-based policy, program, project or
	Intervention.
	FDIN 13. Propose strategies to identify stakenoiders and build coalitions
	and partnerships for influencing public field for according policies and are according to the second s
	that will improve health in diverse perulations
	CHP 3. Ground proposals in prior work by critically reviewing the evicting
	research literature to identify individual and environmental level factors
	that can be changed to address significant public health issues
1	וווועמוו עם הומושבע נט מענובסס סופוווועמווג פעטווג וופמונוו וסטובס.

Student 1 in Environmental H	in Environmental Health Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*		
Self-assessment of city food inspectors; report and orders	FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.		
swimming facilities; weekly iournal.	FDN 10. Explain basic principles and tools of budget and resource management.		
,	FDN 17. Apply negotiation and mediation skills to address organizational or community challenges.		
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.		
	FDN 21. Perform effectively on inter-professional teams.		
Student 2 in Environmental F	lealth Concentration		
Specific products in portfolio that demonstrate application or practice [^]	Competency as defined in Criteria D2 and D4*		
Enteroinvasive Escherichia Coli (EIEC) standard	FDN 1. Apply epidemiological methods to the breadth of settings and situations in public health practice.		
operating procedure document; isolation and	FDN 4. Interpret results of data analysis for public health research, policy or practice.		
characterization of EIEC from CIDT positive specimens	FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering		
products and competencies overview.	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation		
	FDN 21. Perform effectively on inter-professional teams.		
Student 3 in Environmental H	lealth Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*		
Data analysis, outputs and graphs; literature review;	FDN 3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.		
fact sheet.	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.		
	FDN 22. Apply systems thinking tools to a public health issue.		
	EH 1. Evaluate hazards in various environments.		
	EH 4. Integrate exposure and health effects knowledge to investigate health risk and inequity.		
Student 4 in Environmental H	lealth Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*		
Systems analysis and report; employer informational interview project.	FDN 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.		
	FDN 7. Assess population needs, assets and capacities that affect communities' health.		

	FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.
	FDN 14. Advocate for political, social or economic policies and programs that will improve health in diverse populations.
	FDN 20. Describe the importance of cultural competence in communicating public health content.
Student 5 in Environmental H	Health Concentration
Specific products in portfolio that demonstrate application or practice ^A	Competency as defined in Criteria D2 and D4*
Climate change adaptation strategies proposal; recycling	FDN 7. Assess population needs, assets and capacities that affect communities' health.
ambassadors program	FDN 11. Select methods to evaluate public health programs.
presentation; APEx summary.	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.
	EH 3. Identify pathways of exposure to environmental hazards.
	Et l A late mate some some and be alther affects be evide due to increation to

Student 1 in Epidemiology C	oncentration
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Elevator pitch, infographic, focus group proposal &	FDN 3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
transcript, final report.	FDN 4. Interpret results of data analysis for public health research, policy or practice.
	FDN 11. Select methods to evaluate public health programs.
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.
	FDN 21. Perform effectively on interprofessional [^] teams.
Student 2 in Epidemiology C	oncentration
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Theory of change, results- based accountability tables,	FDN 4. Interpret results of data analysis for public health research, policy or practice.
evaluation surveys, literature review, data report, final	FDN 7. Assess population needs, assets and capacities that affect communities' health.
report.	FDN 11. Select methods to evaluate public health programs.
	EPI 1. Develop epidemiologic research questions and formulate testable hypotheses that are grounded in the published public health literature and informed by an understanding of pathophysiology and public health impact.
	EPI 6. Prepare written, oral, and/or visual reports that communicate complex epidemiologic information or concepts to lay and professional audiences, including other epidemiologists.

Student 3 in Epidemiology Concentration	
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Case report forms, meeting minutes, SAS output & data interpretations, data	FDN 2. Select quantitative and qualitative data collection methods appropriate for a given public health context. FDN 4. Interpret results of data analysis for public health research, policy or practice
SAS code.	FDN 21. Perform effectively on interprofessional [^] teams.
	EPI. Collect and/or manage data from screening, surveillance and public databases and from epidemiologic investigations including outbreak investigations.
	EPI. Use statistical software to analyze epidemiologic data using appropriate statistical techniques.
Student 4 in Epidemiology C	oncentration
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Data spreadsheet, SAS code, communication report.	FDN 4. Interpret results of data analysis for public health research, policy or practice.
	FDN 18. Select communication strategies for different audiences and sectors.
	FDN 21. Perform effectively on interprofessional [^] teams.
	EPI. Collect and/or manage data from screening, surveillance and public databases and from epidemiologic investigations including outbreak investigations.
	EPI Use statistical software to analyze epidemiologic data using appropriate statistical techniques.
Student 5 in Epidemiology C	oncentration
Specific products in portfolio that demonstrate application or practice ^A	Competency as defined in Criteria D2 and D4*
Meeting notes, SAS code, data interpretation, case	FDN 1. Apply epidemiological methods to the breadth of settings and situations in public health practice.
report form, data spreadsheet	FDN 4. Interpret results of data analysis for public health research, policy or practice.
	FDN 21. Perform effectively on interprofessional [^] teams.
	EPI 4 (Fall 2019) Collect and/or manage data from screening, surveillance and public databases and from epidemiologic investigations including outbreak investigations.
	EPI 5 (Fall 2019) Use statistical software to analyze epidemiologic data using appropriate statistical techniques.

Student 1 in Maternal and Ch	ild Health Concentration
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Priority briefs.	FDN 7. Assess population needs, assets and capacities that affect communities' health.
	FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.

	FDN 13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
	FDN 18. Select communication strategies for different audiences and sectors.
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.
Student 2 in Maternal and Ch	ild Health Concentration
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
PowerPoint presentation, data for state reports, data analysis.	FDN 3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
	FDN 18. Select communication strategies for different audiences and sectors.
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.
	MCH 1. Appraise & prioritize important health issues for specific MCH populations, including place, race, and status disparities in health and wellness.
	MCH 10. Develop communication tools for programs and policies for diverse audiences.
Student 3 in Maternal and Ch	ild Health Concentration
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Specific products in portfolio that demonstrate application or practice^ Flip chart information tool, trifold brochure.	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.
Specific products in portfolio that demonstrate application or practice^ Flip chart information tool, trifold brochure.	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs. FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.
Specific products in portfolio that demonstrate application or practice^ Flip chart information tool, trifold brochure.	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs. FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making. FDN 17. Apply negotiation and mediation skills to address organizational or community challenges.
Specific products in portfolio that demonstrate application or practice^ Flip chart information tool, trifold brochure.	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs. FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making. FDN 17. Apply negotiation and mediation skills to address organizational or community challenges. MCH 3. Analyze & select appropriate evidence-based guidelines for newborn, child, adolescent, maternal, paternal reproductive, and women's health, including Title V programs.
Specific products in portfolio that demonstrate <u>application or practice^</u> Flip chart information tool, trifold brochure.	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs. FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making. FDN 17. Apply negotiation and mediation skills to address organizational or community challenges. MCH 3. Analyze & select appropriate evidence-based guidelines for newborn, child, adolescent, maternal, paternal reproductive, and women's health, including Title V programs. MCH 6. Formulate an important MCH practice, research or policy question based on scientific literature to present a rationale for MCH policies and programs.
Specific products in portfolio that demonstrate application or practice^ Flip chart information tool, trifold brochure.	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs. FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making. FDN 17. Apply negotiation and mediation skills to address organizational or community challenges. MCH 3. Analyze & select appropriate evidence-based guidelines for newborn, child, adolescent, maternal, paternal reproductive, and women's health, including Title V programs. MCH 6. Formulate an important MCH practice, research or policy question based on scientific literature to present a rationale for MCH policies and programs.
Specific products in portfolio that demonstrate application or practice^ Flip chart information tool, trifold brochure. Student 4 in Maternal and Ch Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4* FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs. FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making. FDN 17. Apply negotiation and mediation skills to address organizational or community challenges. MCH 3. Analyze & select appropriate evidence-based guidelines for newborn, child, adolescent, maternal, paternal reproductive, and women's health, including Title V programs. MCH 6. Formulate an important MCH practice, research or policy question based on scientific literature to present a rationale for MCH policies and programs. MID Health Concentration

sequence, program	FDN 18. Select communication strategies for different audiences and	
evaluation.	sectors.	
	FDN 21. Perform effectively on interprofessional [^] teams.	
	MCH 7. Develop, edit, or use surveys, questionnaires, indicators, or other qualitative or quantitative tools to help assess MCH population needs or evaluate the effectiveness of an existing program for specific MCH population groups.	
	MCH 8. Develop a grant proposal targeted to federal, state, local or philanthropic grant sources to support MCH interventions, programs or research.	
Student 5 in Maternal and Child Health Concentration		
Specific products in		
portfolio that demonstrate	Competency as defined in Criteria D2 and D4*	
portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
portfolio that demonstrate application or practice^ Resource guides (grief, mental health).	Competency as defined in Criteria D2 and D4* FDN 18. Select communication strategies for different audiences and sectors.	
portfolio that demonstrate application or practice^ Resource guides (grief, mental health).	Competency as defined in Criteria D2 and D4* FDN 18. Select communication strategies for different audiences and sectors. FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
portfolio that demonstrate application or practice^ Resource guides (grief, mental health).	Competency as defined in Criteria D2 and D4*FDN 18. Select communication strategies for different audiences and sectors.FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.FDN 21. Perform effectively on interprofessional^ teams.	
portfolio that demonstrate application or practice^ Resource guides (grief, mental health).	Competency as defined in Criteria D2 and D4* FDN 18. Select communication strategies for different audiences and sectors. FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation. FDN 21. Perform effectively on interprofessional^ teams. MCH 1. Appraise & prioritize important health issues for specific MCH populations, including place, race, and status disparities in health and wellness.	

Student 1 in Public Health Ad Specific products in portfolio that demonstrate application or practice^	dministration and Policy (PHAP) Concentration Competency as defined in Criteria D2 and D4*	
Rules of engagement, policy platform one-page documents, presentations.	FDN 14. Advocate for political, social or economic policies and programs that will improve health in diverse populations.	
	FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.	
	FDN 18. Select communication strategies for different audiences and sectors.	
	PHAP 2. Develop management and leadership skills for public and population health care programs, organizations, and systems.	
	PHAP 4. Develop and analyze public health policy.	
Student 2 in Public Health Administration and Policy (PHAP) Concentration		

Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Survey, white paper synopsis, visual mapping schematic,	FDN 2. Select quantitative and qualitative data collection methods appropriate for a given public health context.
stakeholder synopsis, advisory board power point	FDN 7. Assess population needs, assets and capacities that affect communities' health.
--	--
slides.	FDN 9. Design a population-based policy, program, project or intervention
	EDN 12. Dronges strategies to identify stakeholders and build applitions
	and partnerships for influencing public health outcomes
	EDN 19 Communicate audience-appropriate public health content, both
	in writing and through oral presentation
Student 3 in Public Health A	dministration and Policy (PHAP) Concentration
Specific products in	
portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Service directory, poster.	FDN 7. Assess population needs, assets and capacities that affect communities' health.
	FDN 18. Select communication strategies for different audiences and sectors.
	FDN 22. Apply systems thinking tools to a public health issue.
	FDN 20. Describe the importance of cultural competence in communicating public health content.
	PHAP 2. Develop management and leadership skills for public and
Student / in Public Health A	ministration and Policy (PHAP) Concentration
Specific products in portfolio that demonstrate application or practice ^A	Competency as defined in Criteria D2 and D4*
Literature review & annotated	FDN 15. Evaluate policies for their impact on public health and health
bibliography, power point	equity.
presentation, food systems	FDN 18. Select communication strategies for different audiences and
visual analysis.	sectors.
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.
	FDN 22. Apply systems thinking tools to a public health issue.
	PHAP 3. Apply high quality, scientifically rigorous research to address
	problems in public health policy and administration.
Student 5 in Public Health Administration and Policy (PHAP) Concentration	
Specific products in	
portfolio that demonstrate application or practice [^]	Competency as defined in Criteria D2 and D4*
Resource guide, community	FDN 4. Interpret results of data analysis for public health research, policy
needs assessment, logo	or practice.
design.	FDN 7. Assess population needs, assets and capacities that affect communities' health.
	FDN 13. Propose strategies to identify stakeholders and build coalitions
	and partnerships for influencing public health outcomes.
	FDN 18. Select communication strategies for different audiences and sectors.
	PHAP 1. Apply an understanding of the principles of healthcare delivery
	systems to current public health policy and administration.

Student 1 in Public Health Nutrition Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Nutrition best practices for bilingual child and adult center	FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.	
food programs, training power point, cooking activities.	FDN 9. Design a population-based policy, program, project or intervention.	
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
	PHN 4. Understand evidence-based dietary guidelines and nutrition recommendations issued to the public in the US and utilize them to develop nutrition communications and/or guide applied PHN practice.	
	PHN 5. Identify the components of effective nutrition messaging from a public health perspective, including how nutrition messaging strategies may vary by target population or community demographics.	
Student 2 in Public Health Nu	itrition Concentration	
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Food sharing policy memorandum, policy brief.	FDN 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.	
	FDN 12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence.	
	FDN 14. Advocate for political, social or economic policies and programs that will improve health in diverse populations.	
	PHN 7. Evaluate how social determinants of health affect the nutritional status of individuals and/or populations, including their contribution to disparities in nutrition-relevant health outcomes.	
	PHN 11. Analyze nutrition policy, advocacy and/or other similar initiatives, including analysis of engagement strategies for different stakeholder groups.	
Student 3 in Public Health Nutrition Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Healthy kids' meals petition & bill resolution, advocacy fact	FDN 12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence.	
sheet.	FDN 13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes. FDN 14. Advocate for political, social or economic policies and programs that will improve health in diverse populations.	
	FDN 18. Select communication strategies for different audiences and sectors	
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
Student 4 in Public Health Nu	utrition Concentration	
Specific products in portfolio that demonstrate application or practice [^]	Competency as defined in Criteria D2 and D4*	
Needs assessment, infographic.	FDN 9. Design a population-based policy, program, project or intervention.	

	FDN 13. Propose strategies to identify stakeholders and build coalitions	
	and partnerships for influencing public health outcomes.	
	FDN 18. Select communication strategies for different audiences and	
	sectors.	
	PHN 4. Understand evidence-based dietary guidelines and nutrition	
	recommendations issued to the public in the US and utilize them to	
	develop nutrition communications and/or guide applied PHN practice.	
	PHN 7. Evaluate how social determinants of health affect the nutritional	
	status of individuals and/or populations, including their contribution to	
	disparities in nutrition-relevant health outcomes.	
Student 5 in Public Health Nutrition Concentration		
Specific products in		
Specific products in		
Specific products in portfolio that demonstrate	Competency as defined in Criteria D2 and D4*	
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting	Competency as defined in Criteria D2 and D4* FDN 19. Communicate audience-appropriate public health content, both	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4* FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4* FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation. FDN 20. Describe the importance of cultural competence in	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4* FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation. FDN 20. Describe the importance of cultural competence in communicating public health content.	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4*FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.FDN 20. Describe the importance of cultural competence in communicating public health content.FDN 21. Perform effectively on interprofessional^ teams.	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4* FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation. FDN 20. Describe the importance of cultural competence in communicating public health content. FDN 21. Perform effectively on interprofessional^ teams. PHN 6. Understand the importance, value and limitations of using an	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4*FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.FDN 20. Describe the importance of cultural competence in communicating public health content.FDN 21. Perform effectively on interprofessional^ teams.PHN 6. Understand the importance, value and limitations of using an evidence-based framework in public health nutrition practice.	
Specific products in portfolio that demonstrate application or practice^ Program newsletter, meeting minutes, data analysis.	Competency as defined in Criteria D2 and D4*FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.FDN 20. Describe the importance of cultural competence in communicating public health content.FDN 21. Perform effectively on interprofessional^ teams.PHN 6. Understand the importance, value and limitations of using an evidence-based framework in public health nutrition practice.PHN 12. Analyze how policy, systems changes and environmental	

Student 1 in Public Health Practice Concentration	
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Policy analysis; development of procedure manual & decision tree; staff training safety manual.	FDN 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.
	FDN 8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs.
	FDN 9. Design a population-based policy, program, project, or intervention.
	FDN 22. Apply systems thinking tools to a public health issue.
	PHP 2. Develop skills in systemic thinking and understand how systems are connected and interdependent, and understand the potential consequences that systems may have on communities.
Student 2 in Public Health Practice Concentration	
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*
Vivitrol injection comprehensive Minnesota guidebook, two brochures,	FDN 5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings.

opioid use disorder tracking log.	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation	
	FDN 21. Perform effectively on interprofessional [^] teams	
	PHP 2. Develop skills in systemic thinking and understand how systems are connected and interdependent, and understand the potential consequences that systems may have on communities.	
	PHP 4. Demonstrate how to turn data into information and action to influence public health policies and programs.	
Student 3 in Public Health Practice Concentration		
Specific products in portfolio that demonstrate application or practice^	Competency as defined in Criteria D2 and D4*	
Audit form, two presentations, task cover sheet, investigation summary sheet, database master list.	FDN 15. Evaluate policies for their impact on public health and health equity.	
	FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.	
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
	PHP 1. Identify the rational and key steps for policy development: assessment, planning, implementing, advocacy and evaluation.	
	PHP 2. Develop skills in systemic thinking and understand how systems are connected and interdependent, and understand the potential consequences that systems may have on communities.	
Student 4 in Public Health Practice Concentration		
Specific products in portfolio that demonstrate application or practice ^A	Competency as defined in Criteria D2 and D4*	
Census mobilization internal report, state fair flyer, blog posts, submission of public comments/feedback for federal government websites.	FDN 15. Advocate for political, social or economic policies and programs that will improve health in diverse populations.	
	FDN 16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making.	
	FDN 19. Communicate audience-appropriate public health content, both in writing and through oral presentation.	
	PHP 1. Identify the rational and key steps for policy development: assessment, planning, implementing, advocacy and evaluation.	
	PHP 2. Develop skills in systemic thinking and understand how systems are connected and interdependent, and understand the potential consequences that systems may have on communities.	
Student 5 in Public Health Pr	ractice Concentration	

Specific products in portfolio that demonstrate application or practice	Competency as defined in Criteria D2 and D4*
Manuscript, manuscript drafts, website.	FDN 3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.
	FDN 4. Interpret results of data analysis for public health research, policy or practice.
	FDN 13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes.
	FDN 21. Perform effectively on interprofessional [^] teams.
	PHP 5. Develop communication tools to convey appropriate public health messages using a variety of media approaches.

The Applied Practice Experience products listed above can be found in the Electronic Resource File Criterion D folder, within the D5.3 subfolder.

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

Strengths

- Requirement Consistency: Requirements for the APEx are consistent across all MPH programs.
- Applied Practice Online Module: The online module was designed to ensure students submit their learning agreements and products based on the criteria and requirements. It requires multiple layers of approval including the student, preceptor, advisor, and program coordinator. The online module allows students 24/7 access to their information via a secure virtual platform. We efficiently track data and agreements and streamline communications between all necessary parties. SPH staff monitor data to ensure students stay on track, submit, and store their required products, and collate evaluations and grades in one place.
- Coordination & Staffing Support: An applied practice coordinator works alongside each MPH
 program and the associate dean for education to ensure students understand CEPH, as well as
 school and program specific criteria and requirements. The applied practice coordinator also
 provides clarification to MPH students, advisors, coordinators, and preceptors to help ensure that
 every stakeholder understands their role, expectations, timeline, process, and requirements.
 Program coordinators, career services, and academic advisors also guide students along their
 path to successful APEx completion.
- International Experiences: For students completing the APEx internationally, SPH offers a thoughtful process to ensure not only a sound organizational structure, but also a safe international setting in which the student can practice. In case of emergency during travel, the GPS Alliance has an International Emergency Number operated 24/7.

Weaknesses

- Applied Practice is still relatively new. In fall 2018, SPH created the APEx processes by updating
 the previously established resources and expectations from what was our MPH field experience
 requirement. Since then we have been consciously evolving and revising this requirement based
 on feedback, observations, and operational systemization. Faculty, coordinators, and preceptors
 are still adjusting to the concept of competencies and how to apply them through the APEx, as
 demonstrated by the products. We plan to improve the navigation experience of the
 online module by creating additional how-to guides.
- SPH's student body ranges from fulltime students who complete their MPH in two years, to midcareer part-time students who need more flexibility and a longer timeline to graduation. This

makes it challenging to identify the best timing and channels through which to deliver information about the APEx so that students, in turn, can plan the optimal time to complete it.

• We could do better with regard to professional development & placements. Currently, SPH does not arrange site placements for APEx opportunities; instead, we provide students with the necessary resources to find opportunities based on their own academic and professional interests. Once students secure a site, they present their APEx proposal to their adviser for review and approval. In some ways, arranging an APEx site is similar to searching for a job. SPH views the expectation of finding the APEx opportunity as a professional development exercise in a real-world setting. Nevertheless, until they actually secure placements and register, students can feel uncertainty, stress, and unease about meeting the APEx requirement. Coordinators are available to answer any questions at any point during the process.

D6. DrPH Applied Practice Experience (SPH and PHP, if applicable)

D7. MPH Integrative Learning Experience

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

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

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

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

MPH Integrative Learning Experience for Community Health Promotion Concentration	
Integrative Learning Experience	How Competencies are Synthesized
Critical analysis of the Applied	Students who select this option will create a document that is written
Practice Experience	for a public health audience, which is based on the Public Health
	Practice Vignette. The Public Health Practice Vignette is one type of
	manuscript accepted by the American Journal of Public Health. The
	ILE must address at least three competencies that include both
	foundational and program-specific competencies; they may include
	competencies focused on the APEx and should also include F19:
	Communicate audience-appropriate public health content.
Assessment or evaluation	Students choosing this option must either use an existing data source
	or collect data to assess an organization, community or state or
	evaluate a program or policy. The format of this project follows a
	standard journal article submission format. The ILE must address at
	least three competencies that include both foundational and program-
	specific competencies; they may include competencies focused on
	the APEx and should also include F19: Communicate audience-
	appropriate public health content.

Templates D7-1

MPH Integrative Learning Experience for Environmental Health Concentration	
Integrative Learning Experience	How Competencies are Synthesized
Critical analysis of Applied Practice Experience or internship	Students write a paper based on their Applied Practice Experience or other internship, which describes a project they worked on and may be an extension of an Applied Practice Experience product. The project must be relevant to environmental health, and demonstrate the application and integration of skills and knowledge that align with expectations of a professional with an MPH. Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.
Research project: Data analysis	Students complete a research project on an environmental health topic that requires analysis or original data or data obtained from secondary sources. The research project may be based on a project conducted with a faculty member or community partner, a course project, Applied Practice Experience, or may be a topic of interest to the student. The project must be relevant to environmental health, and demonstrate the application and integration of skills and knowledge that align with expectations of a professional with an MPH. Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.
Research project: Literature review	Students complete a research project on an environmental health topic based on a literature review. The research project may be based on a project conducted with a faculty member or community partner, a course project, Applied Practice Experience, or may be a topic of interest to the student. The project must be relevant to environmental health, and demonstrate the application and integration of skills and knowledge that align with expectations of a professional with an MPH. Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.
Grant proposal	Students write a grant proposal on an environmental health topic. The grant proposal must be organized and formatted according to the requirements of the granting agency (e.g, NIH, USDA, EPA, etc.). Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.

MPH Integrative Learning Experience for Environmental Health Concentration	
Integrative Learning Experience	How Competencies are Synthesized
Other types of projects	Students, in consultation with their advisor, may choose a different
	type of project than a conventional research paper, grant proposal or
	critical analysis of an Applied Practice Experience or internship. The
	project must be relevant to environmental health, and demonstrate
	the application and integration of skills and knowledge that align with
	expectations of a professional with an MPH. The ILE product must
	demonstrate excellent written communication skills. Students, in
	consultation with their advisor, choose which competencies best meet
	their ILE project. The faculty advisor and other reviewer assess the
	integration of the competencies as specified in the rubric.

MPH Integrative Learning Experience for Epidemiology Concentration	
Integrative Learning Experience	How Competencies are Synthesized
Data analysis	Students develop an epidemiology research question and write a
	report, often in the form of a manuscript suitable for publication in a
	peer-reviewed journal, which demonstrates the student's ability to
	perform and interpret quantitative analyses, utilizing data collected by
	the student or obtained from another source.
Grant proposal	Students develop a research question and write a grant proposal to
	the National Institutes of Health that includes a literature review
	and/or quantitative analyses and data interpretation. The grant
	proposal option follows the specific format required by NIH

MPH Integrative Learning Experience for Maternal and Child Health Concentration	
Integrative Learning Experience	How Competencies are Synthesized
Critical analysis	Students who select this option will create a document that is written for a public health audience, which is based on the Public Health Practice Vignette. The Public Health Practice Vignette is one type of manuscript accepted by the American Journal of Public Health. The ILE must address at least three competencies that include both foundational and program-specific competencies; they may include competencies focused on the APEx and should also include F19: Communicate audience-appropriate public health content.
Secondary data analysis	The student will complete quantitative and/or qualitative data analysis on a topic relevant to MCH. The dataset can be an epidemiologic study dataset, publicly available survey or surveillance data, open- ended responses to questions in a mixed-methods study, focus group data, results of a program evaluation, and others. The dataset, analyses, and study question could carry forward work produced during or related to the AP or other public health practice experience, or can be arranged through a faculty member or public health / community health agency that has a dataset ready for analysis.

MPH Integrative Learning Experience for Maternal and Child Health Concentration	
Integrative Learning Experience	How Competencies are Synthesized
Literature review	Students interested in deepening their knowledge of a particular MCH
	reviews may choose this option. Two main types of literature reviews
	are allowed: 1) a narrative literature review to identify, assess,
	synthesize, and interpret in writing the published literature on a
	defined area of research involving one or more specific questions,
	identify gaps in knowledge, summarize best practices or optimal
	approaches, and identify areas for future research. 2) A systematic
	review of the literature is to formulate a single narrowly focused
	research question and provide a quantitative and qualitative analysis
	of all relevant evidence, with or without a meta-analysis.

MPH Integrative Learning Experience for Public Health Administration and Policy Concentration		
Integrative Learning Experience	How Competencies are Synthesized	
Primary collection of data	Students can design a data collection research project from beginning to end, writing a protocol, collecting and analyzing data, and writing a conclusion. Either quantitative or qualitative data collection is appropriate. This option allows students to learn the research process and be involved in primary research.	
Secondary data analysis	Students formulate a hypothesis, and organize, analyze, and interpret data.	
Analysis of publicly available population data	Students may analyze publicly available population data (e.g., from IPUMS, NCHS, the census, or other public source); this type of project does not require IRB review but allows the student to formulate a hypothesis and organize, analyze, and interpret data.	
Community health needs assessment or health impact assessment	A community health needs assessment "identifies the gaps between what is and what should be." It is usually done by an agency or organization planning to address those gaps.	
Program evaluation	Program evaluation systematically collects and analyzes data (process and outcome) of health programs and policies to answer questions about their effectiveness.	
Critical literature review	Students may do a systematic, comprehensive, integrative review of the published literature in a specific area that is relevant to public health administration and policy. A systematic review is not simply a book report of published literature. Systematic reviews require an explicit and rigorous methodology to identify relevant studies and to summarize and evaluate their data.	

MPH Integrative Learning Experience for Public Health Administration and Policy Concentration		
Integrative Learning Experience	How Competencies are Synthesized	
Policy analysis	Policy analysis systematically examines policy alternatives to a public health issue or problem. Students evaluate the potential for various policies to achieve stated goals and objectives. This option may take several forms, including a case study, policy analysis, historical or ethical inquiry, or others. Students may include qualitative data collection (e.g. focus groups or key informant interviews) or secondary analysis of data as part of their policy analysis.	
Cost effectiveness analysis	Students evaluate the costs and benefits of specific interventions.	
Continuous quality improvement project	Students may conduct a quality improvement project in a public health agency, health care setting, or community organization using the methods and techniques of quality improvement. Such projects include but are not limited to process mapping, statistical process control, lean and six sigma analysis, and rapid cycle improvement projects.	
Business plan	A student may create a structured and analytic business plan for a business that they wish to start. The plan should include a description of the business, its products and services, a market analysis and marketing strategy, and a financial plan.	

MPH Integrative Learning Experience for Public Health Data Science Concentration		
Integrative Learning Experience	How Competencies are Synthesized	
Written report	Students carry out and report the results of an in-depth data analysis of a public health-relevant dataset of their choosing. Datasets must be approved by the program director. The report should include a description of the dataset (including relevant scientific background), justification of the analytic techniques employed, and clear interpretation of results. Full computer code for reproducing the results of the analysis should also be provided.	
Interactive Data Visualization/Analysis Tool	Students develop an interactive, public-facing data visualization and analysis tool that allows users to explore or better understand a public health-relevant dataset. The tool should be easy to use, well- documented, and allow for non-trivial insights to be derived from the data. Full computer code for creating and deploying the tool should be provided.	

MPH Integrative Learning Experience for Public Health Nutrition Concentration		
Integrative Learning Experience	How Competencies are Synthesized	
Critical analysis of Applied Practice Experience	Students who select this option will create a document that is written for a public health audience, which is based on the Public Health Practice Vignette. The Public Health Practice Vignette is one type of manuscript accepted by the American Journal of Public Health. The ILE must address at least three competencies that include both foundational and program-specific competencies; they may include competencies focused on the APEx and should also include F19: Communicate audience-appropriate public health content.	
Program or policy evaluation via	Students choosing this option must either use an existing data	
primary or secondary data collection	source or collect data to assess an organization, community or state	
& analysis	or evaluate a program or policy. An <u>assessment</u> or data analysis may focus on: (1) health outcomes, (2) behaviors that contribute to health outcomes, (3) individual-level or environmental-level risk/protective factors, (4) community/state resources or deficits, or (5) current policies or programs addressing a specific public health problem. An <u>evaluation</u> should focus on a program or policy being implemented by an organization, community-, state-, or national-level organization. An assessment or evaluation may use existing data sources, or the student can conduct original data collection. The ILE must address at least three competencies that include both CEPH foundational and program-specific competencies.	
Literature review	Students interested in deepening their knowledge of a particular Public Health Nutrition topic and who already have experience in conducting literature reviews may choose this option. Two main types of literature reviews are allowed: 1) a narrative literature review to identify, assess, synthesize, and interpret in writing the published literature on a defined area of research involving one or more specific questions, identify gaps in knowledge, summarize best practices or optimal approaches, and identify areas for future research. 2) A systematic review of the literature is to formulate a single narrowly focused research question and provide a quantitative and qualitative analysis of all relevant evidence, with or without a meta-analysis.	

MPH Integrative Learning Experience for Public Health Practice Concentration		
Integrative Learning Experience	How Competencies are Synthesized	
Critical analysis of Applied Practice	Students write a paper based on their Applied Practice Experience or	
Experience or internship	other internship, which describes a project they worked on and may	
	be an extension of an Applied Practice Experience product. The	
	project must be relevant to environmental health, and demonstrate	
	the application and integration of skills and knowledge that align with	
	expectations of a professional with an MPH. Students, in	
	consultation with their advisor, choose which competencies best	
	meet their ILE project. The faculty advisor and other reviewer assess	
	the integration of the competencies as specified in the rubric.	
Research project: Data analysis	Students complete a research project on an environmental health	

MPH Integrative Learning Experience for Public Health Practice Concentration		
Integrative Learning Experience	How Competencies are Synthesized	
	topic that requires analysis or original data or data obtained from secondary sources. The research project may be based on a project conducted with a faculty member or community partner, a course project, Applied Practice Experience, or may be a topic of interest to the student. The project must be relevant to environmental health, and demonstrate the application and integration of skills and knowledge that align with expectations of a professional with an MPH. Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.	
Research project: Literature review	Students complete a research project on an environmental health topic based on a literature review. The research project may be based on a project conducted with a faculty member or community partner, a course project, Applied Practice Experience, or may be a topic of interest to the student. The project must be relevant to environmental health, and demonstrate the application and integration of skills and knowledge that align with expectations of a professional with an MPH. Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.	
Grant proposal	Students write a grant proposal on an environmental health topic. The grant proposal must be organized and formatted according to the requirements of the granting agency (e.g, NIH, USDA, EPA, etc.). Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.	
Other types of projects	Students, in consultation with their advisor, may choose a different type of project than a conventional research paper, grant proposal or critical analysis of an Applied Practice Experience or internship. The project must be relevant to environmental health, and demonstrate the application and integration of skills and knowledge that align with expectations of a professional with an MPH. The ILE product must demonstrate excellent written communication skills. Students, in consultation with their advisor, choose which competencies best meet their ILE project. The faculty advisor and other reviewer assess the integration of the competencies as specified in the rubric.	

The complete D7-1 template can also be found in the Electronic Resource File, Criterion D folder, D7 subfolder.

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

As an educational culmination, the integrative learning experience (ILE) takes many forms. Students must complete a project that synthesizes at least three competencies, both foundational and program-specific. The outcome of the ILE must be a high-quality written product demonstrating the student's ability to develop a logical, thoughtful document that communicates clearly. The ILE product undergoes a process of review and revision. The ILE must be assessed by at least one faculty member, except in cases where an adjunct or affiliate faculty member would make a more appropriate primary reviewer. Students register for an ILE course PubH 7X94 Integrative Learning Experience, [name of program], where X designates the program the student is in (e.g., students in the Environmental Health Sciences). Advisors use a rubric for grading students and give a grade of satisfactory when all ILE requirements are met and the product has been evaluated. Examples of grading rubrics can be found in the student guidebooks and in the course syllabus. A copy of the grading rubric can also be found in each programs folder within the Electronic Resource File, Criterion D folder, D7.3 subfolder.

Specific MPH programs have additional requirements as described below.

Community Health Promotion

CHP offers two options for the ILE. One CHP faculty member and one other faculty member from the University must approve the final version of the paper and complete the ILE evaluation form.

- Option 1: Written Critical Analysis of the Applied Practice Experience. Students create a document written for a public health audience based on the public health practice vignette. The public health practice vignette is one type of manuscript accepted by the *American Journal of Public Health*. Students register for 1 credit of PubH 7094: Integrative Learning Experience, Community Health Promotion.
- Option 2: Assessment or Evaluation. Students must use an existing data source or collect data to assess an organization, community, or state, or evaluate a program or policy. Students register for 2 credits of PubH 7094: Integrative Learning Experience, Community Health Promotion.

Environmental Health Sciences

Students consult with their advisors to identify an ILE project. Students can choose from a wide range of options, as long as they produce a high-quality, well-written product. Students register for 1-5 credits of PubH 7194 Integrative Learning Experience, Environmental Health Sciences. One faculty member and another reviewer (who may be another faculty member, adjunct or affiliate faculty, or community partner who supervised the project), evaluate the product. When the product has been revised enough to demonstrate excellent written communication skills, the advisor gives the student a satisfactory grade. A rubric is included in the syllabus for PubH 7194.

Epidemiology

The ILE for epidemiology students may take one of two forms:

- A written report, often a manuscript suitable for publication in a peer-reviewed journal, that demonstrates the student's ability to perform quantitative analyses using data collected by the student or obtained from another source. Students who choose this option may register for PubH 6344: Completing the Integrated Learning Experience: Secondary Data Analysis course and use the datasets available in the course to complete the ILE.
- A National Institutes of Health grant proposal that includes a literature review and/or quantitative analyses. The grant proposal option follows the specific format required by NIH. Students register for 2 credits of PubH 7394: Integrative Learning Experience, Epidemiology. At least two faculty members evaluate the ILE.

Maternal and Child Health

Students may select between three options for their ILE and must produce a written document. Two faculty members review and assess the ILE. Students register for 1-2 credits of PubH 7694: Integrative Learning Experience, Maternal and Child Health.

• Option #1: Critical analysis of the applied practice or other public health practice experience

- Option #2: Secondary data analysis relevant to maternal and child health
- Option #3: Literature review

Public Health Administration and Policy (PHAP)

The PHAP ILE takes the form of a practice-based project. The ILE evaluation criteria include demonstrated evidence of integrating selected foundational and program-specific competencies. The ILE requirements include a high-quality paper and oral presentation. The written product must be developed and delivered in a manner useful to external stakeholders, such as nonprofit or governmental organizations. One faculty member and another reviewer (who may be another faculty member, adjunct or affiliate faculty or a community partner), evaluate the product. Students register for two credits of PubH 7794: Integrative Learning Experience, Public Health Administration and Policy. They are also required to enroll in PubH 7784: Master's Project Seminar (1 credit each semester) in both fall and spring semester of their second year. PubH 7784 is designed to help students meet milestones during their ILE so that they complete it on time for evaluation and graduation. Additional requirements are described in the student guidebook.

Public Health Data Science

Students consult with their advisors to identify an ILE project. Students can choose from a written indepth data analysis project or creating an interactive data visualization/analysis tool. Students register for 1-4 credits of PubH 7494 Integrative Learning Experience, Public Health Data Science. One faculty member and another reviewer, who may be another faculty member, adjunct or affiliate faculty or a community partner who supervised the project, evaluate the product. When the product has been revised to the point at which it demonstrates excellent application of data science and communication skills, the advisor gives the student a satisfactory grade.

Public Health Nutrition

Students have three options for their ILE and are required to produce a written document.

- Option 1: Written critical analysis of the Applied Practice Experience. Students create a document written for a public health audience based on the public health practice vignette, which is one type of manuscript accepted by the *American Journal of Public Health*. Students register for 1 credit of PubH 7994: Integrative Learning Experience, Public Health Nutrition.
- Option 2: Assessment or Evaluation. Students must either use an existing data source or collect data to assess an organization, community, or state, or evaluate a program or policy. Students register for 2 credits of PubH 7994: Integrative Learning Experience, Public Health Nutrition.
- Option #3: Literature review.

Public Health Practice

Students consult with their advisors to identify an ILE project. Students can choose from a wide range of options, as long as they produce a high-quality, well-written product. Students register for 1-4 credits of PubH 7294 Integrative Learning Experience, Public Health Practice. One faculty member and another reviewer, who may be another faculty member, adjunct or affiliate faculty or a community partner who supervised the project, evaluate the product. When the product has been revised to the point at which it demonstrates excellent written communication skills, the advisor gives the student a satisfactory grade.

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

Student guidebooks for each program specify ILE requirements, as do the syllabi. Example syllabi and guidebooks for ILE courses listed as part of the MPH program curricula can be found in the Electronic Resource File, Criterion D folder, within the D7.3 subfolder.

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.

Student guidebooks for each program specify ILE guidelines and evaluation criteria. Programs also have a syllabus for the ILE course, which provides guidelines and a rubric.

Example syllabi for ILE courses listed as part of the MPH program curricula can be found in the Electronic Resource File, Criterion D folder, within the D7.3 subfolder.

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.

Samples of student ILE projects can be found in the Electronic Resource File within the Criterion D folder. Examples are found in the D7.5 subfolder, within each specific concentration folder.

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

Strengths

- All MPH programs share the same basic requirements for the ILE, including synthesis of at least three competencies (both foundational and program-specific), the production of a high-quality written product, and review and assessment by at least one faculty member, except in cases where an adjunct or affiliate faculty member would be a more appropriate primary reviewer.
- Specific MPH programs have the option of tailoring the ILE to what is most meaningful for their discipline by adding further requirements to the ILE, which may take the form of specifying the options for the ILE and requiring an oral exam in addition to the written product.

Weaknesses

• We can do a better job of sharing information about specific ILE requirements and rubrics for assessment across programs, so that all programs can learn from each other about what most benefits students.

D8. DrPH Integrative Learning Experience (SPH and PHP, if applicable)

D9. Public Health Bachelor's Degree General Curriculum

D10. Public Health Bachelor's Degree Foundational Domains

D11. Public Health Bachelor's Degree Foundational Competencies

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

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

D14. MPH Program Length

An MPH degree requires at least 42 semester-credits, 56 quarter-credits or the equivalent for completion.

Schools use university definitions for credit hours.

1) Provide information about the minimum credit-hour requirements for all MPH degree options. If the university uses a unit of academic credit or an academic term different from the standard semester or quarter, explain the difference and present an equivalency in table or narrative form.

The MPH requires a minimum of 42 semester hours. Some MPH programs or tracks within a program may require more than 42 semester hours (see table below). Students in dual degree programs complete 42 credit hours and may count up to 14 credit hours in their non-MPH program relevant to public health as elective hours towards the MPH degree.

MPH Program	Minimum Credits Required
Community Health Promotion	48
Environmental Health	Standard: 42 Industrial Hygiene subplan: 52
Epidemiology	Standard: 48 Accelerated: 42
Maternal & Child Health	Standard: 48 Advanced Standing: 42
Public Health Administration & Policy	Traditional: 44 Executive: 42
Public Health Data Science	43
Public Health Nutrition	 Standard: 42 Coordinated: students with a nutrition/dietetics undergraduate degree: 52 students without a nutrition/dietetics undergraduate degree: 59
Public Health Practice/Dual Degrees	42

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

An hour of instructional time equals a 50-minute block of classroom instructional time. This applies to all academic terms. It also applies to courses offered online, per University of Minnesota policy: <u>https://policy.umn.edu/education/instructionaltime-faq</u>. A one-credit course should meet for 50 minutes each week for the length of the semester.

SPH expects that academic work required by the Graduate School and professional school students will exceed three hours per credit per week (including lectures, laboratories, recitations, discussion groups,

field work, study, and so on), averaged over the semester (1 credit x 3 hours of work per week x 14 or 15 weeks in a semester equals 42 to 45 hours of academic work), <u>https://policy.umn.edu/education/studentwork</u>.

Courses delivered via distance (e.g., online, interactive video, one-way transmission) must meet the same instructional time per course credit standard as courses delivered in traditional laboratory and classroom settings.

D15. DrPH Program Length

D16. Bachelor's Degree Program Length

D17. Academic Public Health Master's Degrees

These students also complete coursework and other experiences, outside of the major paper or project, that substantively address scientific and analytic approaches to discovery and translation of public health knowledge in the context of a population health framework.

Finally, students complete coursework that provides instruction in the foundational public health knowledge at an appropriate level of complexity. This instruction may be delivered through online, in-person or blended methodologies, but it must meet the following requirements while covering the defined content areas.

The school identifies at least one required assessment activity for each of the foundational public health learning objectives.

The school validates academic public health master's students' foundational public health knowledge through appropriate methods.

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

SPH has five master's degrees: biostatistics, clinical research, environmental health sciences, epidemiology (rarely used), and health services research, policy & administration. Academic masters' degrees are administered through the graduate school:

<u>https://policy.umn.edu/education/mastersperformance</u>. A master's degree requires at least 30 course credits. Students must also complete a master's project, submit a written report on the project, and pass an oral exam. The examination committee includes two graduate faculty members from the program and one graduate faculty member from another program. We identify all academic master's degree programs by degree and area of specialization in the Instructional Matrix (Table Intro-1).

Please note: Students do not directly apply for the MS in epidemiology. The MS degree in epidemiology is offered only for PhD students in epidemiology who are unable to complete their dissertation work and PhD degree.

Online curriculum information for each of the following MS degrees can be found on each program page of the SPH website:

- Biostatistics
- <u>Clinical Research</u>
- Environmental Health
- Health Services Research, Policy & Administration

Curricular Requirements for MS Degree Programs

Biostatistics (36 cr)

Core Requirements (27 cr) PubH 6250 Foundations of Public Health (2 cr) PubH 7405 Biostatistical Inference I (4 cr) STAT 5101 Theory of Statistics I (4 cr) or STAT 8101 Theory of Statistics I (3 cr) PubH 7406 Biostatistical Inference II (3 cr) PubH 7450 Survival Analysis (3 cr) STAT 5102 Theory of Statistics II (4 cr) or STAT 8102 Theory of Statistics II (3 cr) PubH 7465 Biostatistical Consulting (2 cr) PubH 7430 Methods for Correlated Data (3 cr) PubH 7494 Integrative Learning Experience (1 cr)

Computing and Machine Learning (3 cr) Students must select at least 3 credits from the following courses. PubH 6420 Introduction SAS Programming (1 cr) PubH 7460 Advanced Statistical Computing (3 cr) PubH 7461 Exploring & Visualizing Data in R (2 cr) PubH 7462 Advanced Programming & Data Analysis in R (2 cr) PubH 7475 Statistical Learning & Data Mining (3 cr)

Electives (6 cr) Students must select at least 6 credits from the following courses. PubH 7440 Introduction to Bayesian Analysis (3 cr) PubH 7445 Statistics in Genetics & Molecular Biology (3 cr) PubH 7470 Statistics for Translational & Clinical Research (3 cr) PubH 7485 Methods for Causal Inference (3 cr) PubH 8422 Modern Non-parametrics (3 cr) PubH 8472 Spatial Biostatistics (3 cr)

Clinical Research (38 cr)

Core Requirements (28 cr) PubH 6250 Foundations of Public Health (2 cr) PubH 6301 Fundamentals of Clinical Research (3 cr) PubH 6310 Clinical Epidemiology I (1 cr) PubH 6311 Clinical Epidemiology II (1 cr) PubH 6320 Fundamentals of Epidemiology (3 cr) or PubH 6341 Epidemiologic Methods I (3 cr) PubH 6450 Biostatistics I (4 cr) PubH 6451 Biostatistics II (4 cr) PubH 6742 Ethics in Public Health: Research and Policy (1 cr) PubH 7415 Introduction to Clinical Trials (3 cr) or PubH 7420 Clinical Trials: Design, Implementation & Analysis (3 cr) PubH 8394 Plan B: Capstone project (6-10 cr)

Electives

As needed to reach 38 total credits

Environmental Health Sciences (30 cr)

Core Requirements (14-21 cr) PubH 6102 Issues in Environmental and Occupational Health (2 cr) PubH 6742 Ethics in Public Health: Research and Policy (1 cr) or PubH 6741 Ethics in Public Health: Professional Practice and Policy (1 cr) PubH 6250 Foundations of Public Health (2 cr) * PubH 6320 Fundamentals of Epidemiology* (3 cr) or PubH 6341 Epidemiologic Methods I (3 cr) PubH 6414 Biostatistical Literacy (3 cr) or PubH 6450 Biostatistical Literacy (3 cr) or PubH 6450 Biostatistical Analysis (4 cr) PubH 7195 MS Environmental Health Sciences Plan B Project (3 cr) or PubH 8777 Thesis Credits: Master's (10 cr) *Please note that students choose whether to complete a Plan A or Plan B project in consultation with their advisor.*

*Required for students who do not have an MPH or a bachelor's degree in Public Health.

Electives (9 cr minimum)

Students choose electives in consultation with their advisors and may choose a set of electives that are grouped by speciality area. The full selection of coursework options are found in the UMN catalog.

MS environmental health sciences offers one track (below). Please note that track refers to official University sub-plans. A sub-plan is a formally designated, distinct content area within a single, broader discipline (e.g., program or concentration) that appears on the official University transcript. For example, the transcript for a student studying industrial hygiene earning a master's degree in environmental health sciences will indicate both the program (environmental health sciences) and the sub-plan (industrial hygiene).

Industrial Hygiene Sub-Plan Requirements

IH Core Requirements (23 cr)

PubH 6130 Occupational Medicine: Principles & Practice (2 cr)

PubH 6150 Interdisciplinary Evaluation of Occupational Health & Safety Field Problems (3 cr)

PubH 6159 Principles of Toxicology I (2 cr)

PubH 6170 Introduction to Occupational Health & Safety (3 cr)

PubH 6172 Industrial Hygiene Applications (2 cr)

PubH 6173 Exposure to Physical Agents (2 cr)

PubH 6174 Control of Workplace Exposures (3 cr)

PubH 6175 Environmental Measurements Laboratory (2 cr)

PubH 6192 Measurement & Properties of Air Contaminants (2 cr)

PubH 6193 Advanced Topics in Human Exposure Science (2 cr)

Applied Practice Experience (3 cr) PubH 7196

Electives (11 cr)

Students choose electives in consultation with their advisor. The full selection of coursework options are found in the UMN catalog.

Epidemiology (38 cr)

<u>Core Requirements (19 cr)</u> PubH 6250* Foundations of Public Health (2 cr) PubH 6348 Writing Research Grants (2 cr) PubH 7401 Fundamentals of Biostatistical Inference (4 cr) PubH 7420 Clinical Trials: Design, Implementation, & Analysis (3 cr) PubH 8341 Advanced Epidemiologic Methods: Concepts (3 cr) PubH 8342 Advanced Epidemiologic Methods: Applications (3 cr) PubH 8345 How to be an Anti-racist Epidemiologist (1 cr) GRAD 8101 Teaching in Higher Education (3 cr) or GRAD 8200 Teaching & Learning Topics in Higher Education: Teaching for Learning (1 cr) *Required for students who do not have an MPH or a bachelor's degree in Public Health.

MS epidemiology offers two tracks (below). Please note that tracks refer to official University sub-plans. A sub-plan is a formally designated, distinct content area within a single, broader discipline (e.g., program or concentration) that appears on the official University transcript. For example, the transcript for a student earning a master's degree in epidemiology will indicate both the program (epidemiology) and the sub-plan (social/behavioral).

Clinical & Biological Track Requirements	Social & Behavioral Track Requirements
Minimum 3 credits from the following:	Minimum 3 credits from the following:
PubH 6915 Nutrition Assessment (2 cr)	PubH 6915 Nutrition Assessment (2 cr)
PubH 7402 Biostats Modeling & Methods (4 cr)	PubH 7402 Biostats Modeling & Methods (4 cr)
PubH 7405 Biostats Inference I (4 cr)	PubH 7405 Biostats Inference I (4 cr)
PubH 7406 Biostats Inference II (3 cr)	PubH 7406 Biostats Inference II (3 cr)
PubH 7430 Stats Methods for Corr. Data (3 cr)	PubH 7430 Stats Methods for Corr. Data (3 cr)
PubH 7445 Stats for Human Genetics & Molecular	PubH 7445 Stats for Human Genetics & Molecular
Biology (3 cr)	Biology (3 cr)
PubH 8141 Doctoral Seminar in Observational	PubH 8141 Doctoral Seminar in Observational
Inference (2 cr)	Inference (2 cr)
PubH 8343 Synthesis & Application of Methods in	PubH 8343 Synthesis & Application of Methods in
Epi Research (3 cr)	Epi Research (3 cr)
PubH 8344 Adv Epi Methods Workshop (1 cr)	PubH 8344 Adv Epi Methods Workshop (1 cr)
PubH 8804 Adv Quant Methods Seminar (3 cr)	PubH 8804 Adv Quant Methods Seminar (3 cr)
Content Area Courses (4 cr)	Content Area Courses (4 cr)
PubH 6140 Occ & Env Epidemiology (2 cr)	PubH 6333 Human Behavior I (2 cr)
Public 6381 Genetics in Public Health (2 cr)	PubH 6334 Human Behavior II (2 cr)
Public 6385 Epi & Control of Inf Diseases (2 cr)	Fleetings (12 cm)
Public 6386 CVD Epi & Prevention (2 cr)	Electives (12 cr)
Public 6387 Cancer Epidemiology (2 cr)	Public 6355 Pathophys. of Human Disease (4 cr)
Pubh 6389 Nutritional Epidemiology (2 cr)	Public 7391 Independent Study: Epi (1-4 cr)
Flactives (12 cr)	Publi 7392 Readings in Epi (1-4 cr)
Electives (12 cr)	Publi 7394 Capsione Credits (2 cr)
Public 355 Palnophys of Human Disease (4 cr)	Publi 7405 Biostats Inference I (4 cr)
Publi 7391 Independent Study: Epi (1-4 cr)	PUDE 7406 Biostats Interence II (3 cr)
Public 7392 Readings in Epidemiology (1-4 Cr)	PUDIT 7430 Stats Methods for Corr. Data (3 Cr)
Public 7394 Capsione Credits (2 Cr)	Puber (445 Stats for Human Genetics & Molecular Biology (2 or)
Public 7400 Biostats Interence I (4 cr)	Diology (3 cr) Duble 7450 Summer Analysis (2 cm)
PUDE 7450 SIRIS MEIDOOS IOF COTE DATA (3 CC)	EUDE 7430 SULVIVALADAIVSIS (3 CD

PubH 7445 Statistics for Human Genetics &	PubH 8343 Synthesis & Application of Methods in
Molecular Biology (3 cr)	Epi Research (3 cr)
PubH 7450 Survival Analysis (3 cr)	PubH 8344 Adv Epi Methods Workshop (1 cr)
PubH 8343 Synthesis & Application of Methods in	VMed 5180 Ecology of Infectious Diseases (3 cr)
Epidemiology Research (3 cr)	VMed 8090 Epidemiology of Zoonoses (2 cr)
PubH 8344 Adv Epi Methods Workshop (1 cr)	
VMed 5180 Ecology Of Infectious Diseases (3 cr)	
VMed 8090 Epidemiology of Zoonoses (2 cr)	

Health Services Research, Policy & Adminimstration (34 cr)

Core Requirements (21-22 cr) PubH 6250 Foundations of Public Health (2 cr) PubH 6320 Fundamentals of Epidemiology (3 cr) or PubH 6341 Epidemiological Methods I (3 cr) PubH 6450 Biostatistics I (4 cr) PubH 6451 Biostatistics II (4 cr) PubH 6724 Health Care System & Public Health (3 cr) PubH 6741 Ethics in Public Health Prof. Practice (1 cr) or PubH 6742 Ethics in Public Health: Res & Policy (1 cr) PubH 6806 Principles of Public Health Research (2 cr) or PubH 6864 Outcomes Research (3 cr) PubH 7894 Plan B Master's Project Credits (2 cr)

Electives (12-13 cr)

Students choose electives in consultation with their advisors and may choose a set of electives that are grouped by speciality area. The full selection of coursework options are found in the UMN catalog.

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.

All MS students are required to take PubH 6250: Foundations of Public Health, which addresses and assesses the foundational public health knowledge domains. Students can bypass PubH 6250 if they enter the program with a bachelor's degree in public health or an MPH from a CEPH-accredited school or program in public health, or pass an equivalency exam. Please find the D17-1 template in the Electronic Resource File, Criterion D folder, D17.2 subfolder.

Template D17-1: Foundational Public Health for MS Degrees: Biostatistics, Clinical Research, Environmental Health Sciences, Epidemiology, Health Services Research Policy & Administration

Content Coverage for all MS Degrees		
Content	Course number(s) and name(s)	Specific assessment opportunity
1. Explain public health history, philosophy and values.	PubH 6250 - Foundations of Public Health	 Assessed across graded discussions as well as group and independent activities. Students will: participate in an Introduction Discussion in which they reflect on the primary functions of public health and their driving values. complete the Content Quiz which includes seven questions focused on this competency: 1) All of the following are tenets of Global Health 3.0, described in Dr. Prasad's lecture, EXCEPT (multiple choice); 2) According to the CDC Foundation, public health is concerned with protecting the health of entire populations, which it defines as being a minimum of 10,000 people, (true/false); 3) Lucy, Anarcha, and Betsey are now recognized as (multiple choice); 4) The racist, false beliefs about assumed biological pain rating differences between Black and white patients that informed the work of James Marion Sims in the 1800s persist today, (true/false); 5) All of the following are true about "Typhoid Mary", EXCEPT (multiple choice); 6) Which of the following is true of the 1932 Tuskegee Study of Untreated Syphilis (TSUS) in the Negro Male? (multiple choice); and 7) "Governments, globally, have upheld human rights and global governance, demonstrating effective solidarity throughout the COVID-19 pandemic" (true/false). compose a Foundations of Public Health Op-Ed on any topic related to what they believe is needed in order for public health to achieve and advance health equity and improve health in diverse
		• compose a Foundations of Public Health Op-Ed on any topic related to what they believe is needed in order for public health to achieve and advance health equity and improve health in diverse populations; students will also submit a written reflection and describe the ways that their Op-Ed aligns with public health history, philosophy and/or values, citing evidence from course content.

2. Identify the core functions of public health and the 10 Essential Services.*	PubH 6250 - Foundations of Public Health	 Assessed through graded discussions and independent activities. Students will: complete the Content Quiz which includes three questions focused on this competency: 1) The 10 Essential Public Health Services framework was updated in 2020, which centers (multiple choice); 2) All of the following are part of the core functions of public health EXCEPT (multiple choice); and 3) Which of the following is an example of Public Health's core function of Assurance toward addressing health equity? (multiple choice). complete the Our Connected World Discussion in which they respond to two peers by naming a particular core function or essential service that was applied by their peer and describe how.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete the Content Quiz which includes four questions focused on this competency: 1) Strictly quantitative analyses have provided promising climate-health insights and adequately capture local contexts and culturally-specific experiences (true/false); 2) All of the following are common examples of qualitative methods EXCEPT (multiple choice); 3) A primary aim of quantitative research in public health is to (multiple choice); and 4) In qualitative research, the questions are most often (multiple choice).
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program.	PubH 6250 - Foundations of Public Health	 Assessed through group and independent activities. Students will: complete The State of U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burden-to draw comparisons and make conclusions about health systems across national and international settings. compose and share an Advocacy for Equity Letter or Video on a topic from an instructor-provided list of recent public health policy issues, specifically naming relevant causes and trends of population health morbidity and mortality associated with the topic and evaluating policy's potential impact.
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PubH 6250 - Foundations of Public Health	 Assessed through group and independent activities. Students will: complete the Content Quiz which includes three questions focused on this competency: 1) Regular mammograms are used to detect breast cancer at an early stage, thereby increasing the likelihood of receiving the most effective forms of treatment. This is an example of which level of prevention? (multiple choice); 2) In Dr. Camara Jones' analogy of the Cliff of Good Health, tertiary prevention is represented by (multiple choice); and 3) Which of the following is an example of a primary prevention strategy that addresses a social determinant of health? (multiple choice). participate in the Our Connected World group learning activity in which students will apply and demonstrate your understanding of the impacts of globalization on population health as well as the

		interconnectedness of human, animal, and environmental health, completing and sharing a table in which they identify public health interventions at each level of prevention and describe why their intervention fits that level of prevention.
6. Explain the critical importance of evidence in advancing public health knowledge.	PubH 6250 -	Assessed through group and independent activities. Students will: • participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.
		• participate in the Health Communication group learning activity in which they review a published public health Op-Ed and evaluate whether or not it achieved the basic, expected components of this writing style; students will discuss and defend whether or not they perceive an Op-Ed to have provided evidence in a way that advances public health knowledge.
	Public Health	• compose and share an Advocacy for Equity Letter or Video on a topic from an instructor-provided list of recent public health policy issues. Briefly describe the primary evidence, knowledge, and/or experiences that have shaped your opinion.
		• compose a Foundations of Public Health Op-Ed on any topic related to what they believe is needed in order for public health to achieve and advance health equity and improve health in diverse populations, provide persuasive evidence supporting their thesis throughout; students will also submit a written reflection discussing how effectively and thoroughly they achieved the goal to leverage evidence to advance their public health knowledge.
7. Explain effects of environmental factors on a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.
		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
8. Explain biological and genetic factors that affect a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.

		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
9. Explain behavioral and psychological factors that affect a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete The State of U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burden- -to draw comparisons and make conclusions about health systems across national and international settings.
		• participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.
		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities.	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete The State of U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burden- -to draw comparisons and make conclusions about health systems across national and international settings.
		• participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.
		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
11. Explain how globalization affects global burdens of disease.	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the Our Connected World group learning activity in which students will apply and demonstrate your understanding of the impacts of globalization on population health as well as the interconnectedness of human, animal, and environmental health; specifically, they will describe one or more way(s) that globalization affects population health, considering impacts on disease burdens or trends as well as health disparities and inequitiesciting course content.
--	--	---
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health).	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the Our Connected World group learning activity in which students will apply and demonstrate your understanding of the impacts of globalization on population health as well as the interconnectedness of human, animal, and environmental health; specifically, they will describe one or more way(s) that the connections among human health, animal health and ecosystem health affect population health, considering obstacles and/or opportunities related to the overlapping health of living thingsciting course content.

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.

The full D17-2 tables (by concentration) can be found in the Electronic Resource File, Criterion D folder, D17.3 subfolder.

Assessment of Competencies for Academic Master's Degrees in Biostatistics				
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ		
1. Apply probability and statistical theory to	Stat 5101- Theory of	Stat 5101: As part of weekly assignments and exams, students use		
understand the uses and limitations of analysis	Statistics I	techniques from probability theory to confirm the properties of		
methods.		standard univariate distributions used in statistics. The final		
	Stat 5102 - Theory of	examination in STAT 5101 covers material from the entire		
	Statistics II	semester of the course including basic probability questions, combinatorics, expectation, variance, moment generating		
	Stat 8101 - Theory of	functions, and the standard univariate and multivariate distributions		
	Statistics I	covered.		
	Stat 8102 - Theory of Statistics II	Stat 5102: As part of weekly assignments and exams, students use techniques from statistical theory to rigorously prove the properties of standard statistical estimation methods.		
		Stat 8101: As part of weekly assignments and exams, students use techniques from probability theory to rigorously prove the properties of univariate and multivariate distributions used in statistics.		
		Stat 8102: As part of weekly assignments and exams, students use techniques from statistical theory to rigorously prove the properties of univariate and multivariate statistical estimation methods.		
2. Apply appropriate coding practices, and use at	PubH 7450 - Survival	PubH 7450: As part of weekly assignments and exams, students		
least one statistical programming language to	Analysis	carry out time-to-event analyses using the R or SAS statistical		
wrangle, visualize, and analyze data, and to		programming languages. The analysis tasks typically involve		
present (using tables, figures, etc.) analysis		organizing data appropriately for time-to-event analysis,		
results.		implementing the appropriate analytic method, and presenting the		
		results of the analysis in graphical or tabular form.		

Template D17-2: MS Biostatistics

Assessment of Competencies for Academic Master's Degrees in Biostatistics			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
3. Select and carry out data analysis methods	PubH 7430 - Statistical	PubH 7430: Students collaborate on final group projects where	
commonly used in biostatistical practice, including	Methods for Correlated	they are tasked with choosing and implementing regression	
exploratory data analysis, descriptive statistics,	Data	methods for correlated data to analyze a biomedical dataset of	
estimation (point and interval), hypothesis testing,		their choice. Students also prepare peer reviews of other groups'	
methods for independent or correlated data, for		projects. Projects are assessed on the quality of statistical analysis	
continuous or categorical outcomes, and for		plan, final study report, peer evaluation of other projects, and	
censored data, and non-parametric and		active participation.	
resampling/re-randomization methods.			
4. Collaborate in the ethical design, conduct, and	PubH 7420 - Clinical	PubH 7420: Students work in interdisciplinary teams to write a	
analysis of research studies as part of an	Trials	complete research study protocol; teams must determine	
interdisciplinary research team.		appropriate study design, sample size, and statistical tests.	
	PubH 7494 - Integrated	Together, students are asked to rely on each other's areas of	
	Learning Experience	expertise to implement study protocols and conduct a clinical	
		research study, concluding with data cleaning and analysis of	
		collected information. Students are assessed on the design	
		concept for the study as well as the completeness and	
		appropriateness of the statistical analysis plan.	
		PubH 7494: In the course of the Integrated Learning Experience,	
		students collaborate with non-statisticians who provide the data or	
		research problem of interest.	
5. Interpret the results of data analyses and	PubH 7405 - Biostatistics	PubH 7405: Students collaborate to prepare final group	
communicate them to non-statisticians.	Regression	presentations where they summarize and present the statistical	
		analysis methods and results from two recent papers in the	
	PubH 7494 - Integrated	biomedical literature that use regression.	
	Learning Experience		
		PubH 7494: In the course of thesis work, students communicate	
		their methods and results to non-statistician collaborators as well	
		as to other faculty and graduate students. A committee consisting	
		of at least two internal and one external faculty member assess the	
		scientific and statistical rigor of the work and the quality of	
		communication in the written paper and oral presentation.	

Assessment of Competencies for Academic Master's Degrees in Clinical Research			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Design high	PubH 6301 - Fundamentals of	PubH 6301: A series of six assignments designed to train students on clinical research	
quality clinical	Clinical Research	design and implementation are completed. Ranging from Good Clinical Practice training,	
research studies		to research question development, to participant screening and recruitment/retention	
with scientific	PubH 6310 - Clinical	considerations, to protocol design and adverse events, students learn the how-to's of	
integrity.	Epidemiology 1	clinical research.	
	PubH 6311 - Clinical	PubH 6310: Exercises on cohort and case control study analysis test student	
	Epidemiology 2	understanding of approaches to measure survival and other outcomes in cohort and case-	
	PubH 8394 - Canstone Project	Students solve problems testing their understanding of population attributable risk	
		Exercises on confounding, bias and effect modification test student understanding of the	
		types of effect modification and the influence of bias on measurement of associations	
		between exposure and outcomes.	
		PubH 6311: Students are asked to identify a substantial guideline that addresses both	
		diagnostic testing and treatment in an area of interest. Students must identify	
		recommendations and state the level of scientific evidence underlying that	
		recommendation, as well as the study designs which provided the evidence.	
		PubH 8394: Students complete a master's research project where they design and	
		implement a clinical research study. Students collect and analyze data, and submit a	
		written paper that is evaluated by a faculty committee who provide comments on the	
		quality of the research. Students also complete an oral presentation that is open to the	
		public, where a faculty committee assesses the ability of the student to conduct research,	
		including an explanation of proper methodology and data analysis. The faculty committee	
		decides whether the research is of high enough quality for the student to pass and receive	
		their MS degree.	

Template D17-2: MS Clinical Research

Assessment of Competencies for Academic Master's Degrees in Clinical Research			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
 Collect, manage analyze clinical research findings. 	PubH 6301 - Fundamentals of Clinical Research	PubH 6301: There are 6 assignments in this class which test competency in research question development, protocol design to ensure valid data collection, strategies to recruit participants in diverse populations, and analysis of adverse events arising from clinical	
	PubH 6310 - Clinical Epidemiology 1	studies. Each group project presentation discusses a drug or device which was on market but had adverse patient outcomes and analyzes missteps in data interpretation and decision making which led to the adverse patient outcomes.	
	PubH 6311 - Clinical		
	Epidemiology 2	PubH 6310: Exercises on cohort and case control study analysis test student understanding of approaches to measure survival and other outcomes in cohort and case-	
	PubH 8394 - Capstone Project	control studies, as well as measures of association between exposure and outcomes. Students solve problems testing their understanding of population attributable risk. Exercises on confounding, bias and effect modification test student understanding of the types of effect modification and the influence of bias on measurement of associations between exposure and outcomes.	
		PubH 6311: Students are asked to identify a substantial guideline that addresses both diagnostic testing and treatment in an area of interest. Students must identify recommendations and state the level of scientific evidence underlying that recommendation, as well as the study designs which provided the evidence. This work tests if students are able to translate research findings into practice recommendations. The manuscript proposal tests students competence in framing a research question using large existing federally funded databases, identifying relevant variables in the data, creating an analytic plan and describe expected conclusions.	
		PubH 8394: Students complete a master's research project where they design and implement a clinical research study. Students collect and analyze data, and submit a written paper that is evaluated by a faculty committee who provide comments on the quality of the research. Students also complete an oral presentation that is open to the public, where a faculty committee assesses the ability of the student to conduct research, including an explanation of proper methodology and data analysis. The faculty committee decides whether the research is of high enough quality for the student to pass and receive their MS degree.	

Assessment of Competencies for Academic Master's Degrees in Clinical Research				
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ		
3. Develop written and oral communication skills to communicate with scientific and lay audiences.	PubH 8394 - Capstone Project	PubH 8394: Students complete a master's research project where they design and implement a clinical research study. Students collect and analyze data, and submit a written paper that is evaluated by a faculty committee who provide comments on the quality of the research. Students also complete an oral presentation that is open to the public, where a faculty committee assesses the ability of the student to conduct research, including an explanation of proper methodology and data analysis. The faculty committee decides whether the research is of high enough quality for the student to pass and receive their MS degree.		
4. Analyze human subject protections and responsible conduct of research.	PubH 6301 - Fundamentals of Clinical Research	PubH 6301: Students work in teams to research and present on a controversial topic in clinical research. They are asked to research evidence for and against, and consider whether they agree or disagree with current medical recommendations, they must discuss the ethical considerations and the role of FDA in the scenarios presented to them which may include topics such as Thalidomide, device recalls, or synthetic mesh.		

Template D17-2: MS Environmental Health

Please note: Some students in environmental health sciences focus on industrial hygiene (IH). The IH curriculum has additional requirements to meet the accreditation standards of the Accreditation Board for Engineering and Technology (ABET) body. IH is a sub-plan within EnHS. A sub-plan is a formally designated, distinct content area within a single, broader discipline (e.g., program or concentration) that appears on the official University transcript. For example, the transcript for a student focusing on IH will indicate both the program (EnHS) and the sub-plan (industrial hygiene).

Assessment of Competencies for Academic Master's Degrees in Environmental Health			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Apply systems	PubH 6102 - Issues in	PubH 6102: A detailed description of the assignment that assesses this competency is	
thinking tools to	Environmental Health	included in the ERF. For both the in-person and the online offering of the course, this is a	
analyze		substantial multi-part assignment. It is the capstone project for the in-person offering of	
environmental		PubH 6102 and one of two major projects for the online offering of PubH 6102. Both	
health issues.		projects require extensive in depth work on the part of the student and require them to	
		integrate and synthesize topics that they have studied throughout the course.	

Assessment of Competencies for Academic Master's Degrees in Environmental Health			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
2. Analyze and	PubH 6741 - Ethics in Public	PubH 6741: For the final ethics analysis exercise, students will write a structured analysis	
evaluate ethical	Health: Professional Practice and	of an ethical issue in public health not discussed previously in class.	
issues in	Policy		
environmental		PubH 6742: For the final project, students will choose an item within environmental health	
public health.	PubH 6742 - Ethics in Public	to review and/or revise.	
	Health: Research & Policy		
3. Conduct	PubH 7195 - MS Environmental	PubH 7195 or PubH 8777: Students demonstrate their ability to conduct environmental	
environmental	Health Sciences Plan B Project	health research by completing a master's research project under the guidance of a faculty	
health research.	OR	advisor. Students submit a written paper that is evaluated by a faculty committee who	
		provide comments on the quality of the research. Students also complete an oral exam in	
	PubH 8777 Thesis Credits:	which a faculty committee assesses the ability of the student to conduct research,	
	Master's	including an explanation of proper methodology and data analysis. The faculty committee	
		decides whether the research is of high enough quality for the student to pass and receive	
		their MS degree. Students prepare for their research project by taking courses that	
		address specific types of research methodology. Examples include: PubH 6184 Field and	
		Laboratory Methods in Public Health Entomology; PubH 6123 Violence Prev & Control:	
		Theory, Research, App; PubH 8161 Current Literature in Toxicology; PubH 6183 Theory &	
		Practice of Outbreak Investigations; PubH 6175 Environmental Measurements Laboratory;	
		PubH 6342 Epidemiologic Methods II. The Graduate School of the University accepts two	
		different formats for the master's project. The format for the Plan B (PubH 7195) is	
		specified by the MS program. The format for the Plan A (PubH 8777) is specified by the	
		Graduate School. Most Environmental Heath students complete a Plan B project. Some	
		students, who, in consultation with their advisor, elect to spend more time on research and	
		less time on formal course, and complete a Plan A project.	

Assessment of Competencies for Academic Master's Degrees in Epidemiology			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Develop epidemiologic	PubH 6348 - Writing Research	PubH 6348: By preparing a grant proposal, students ask a fundamental research	
research questions and	Grants	question, and research current public health literature in order to move from an	
formulate testable hypothesis		initial idea through to a fully developed grant application, that if funded could	
grounded in the published	PubH 7401 - Fundamentals of	advance the field. In weekly assignments, students create each section of a grant	
public health literature.	Biostatistical Inference	proposal and receive instructor feedback to incorporate into the final proposal.	
		Students work collaboratively to provide proposal feedback to their peers and	
	PubH 7394 - Integrative	participate in a mock grant review panel.	
	Learning Experience:		
	Epidemiology	PubH 7401: Students are tested on their ability to write down mathematical	
		models for testing hypotheses in formal Neyman-Pearson style testing as well as	
	PubH 8341 - Advanced	through frequentist and Bayesian procedures for effect estimation. In class	
	Epidemiologic Methods:	examples and exercises are all grounded in the public health literature.	
	Concepts		
		PubH 7394: The project requires students to identify a gap in scientific	
		knowledge, propose a research question grounded in the current body of public	
		health literature, and design an epidemiologic study to both lay and professional	
		audiences. Successful completion of a written thesis and the oral defense	
		documents the students' mastery of a content area.	
		PubH 8341: Students are instructed in current causal inference theory. They complete exercises, homeworks and exams that are designed to strengthen their understanding and test their ability to formulated meaningful scientific questions and design studies that can be used to test those hypotheses.	

Template D17-2: MS Epidemiology

Assessment of Competencies for Academic Master's Degrees in Epidemiology				
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ		
2. Apply epidemiologic and	PubH 7401 - Fundamentals of	PubH 7401: Students are assessed on probability and statistical inference via ten		
biostatistical research skills.	Biostatistical Inference	homework assignments; in-class activities provide opportunities for students to		
		work out examples and investigate concepts, using R programming language.		
	PubH 7394 - Integrative			
	Learning Experience:	PubH 7394: The project calls on students to design and conduct epidemiological		
	Epidemiology	research, including data collection, management, and analysis.		
	PubH 8341 - Advanced	PubH 8341: Students demonstrate an understanding of epidemiologic methods		
	Epidemiologic Methods:	through the completion of eight homework assignments on topics related to		
	Concepts	epidemiologic inference, measures of effect and association, counterfactuals, effect modification, confound and DAGs, bias, hypothesis testing and		
	PubH 8342 - Advanced	epidemiologic study design.		
	Epidemiologic Methods:			
	Applications	PubH 8342: Students complete 8 homework assignments, which assess skills in applying various biostatistical modeling methods to epidemiologic data; students submit a final project based on an analysis technique and unique dataset in publication format. The final project tests student's understanding of statistical methods and demonstrates analytic skills.		
3. Conduct epidemiological	PubH 7394 - Integrative	PubH 7394: Students are required to have their research reviewed and approved		
research in an ethical and	Learning Experience:	by an institutional review board, thereby demonstrating adherence to conducting		
responsible manner.	Epidemiology	research in an ethical manner.		
4. Prepare written, oral,	PubH 7394 - Integrative	PubH 7394: A written paper is evaluated for demonstration of advanced writing		
and/or visual reports that	Learning Experience:	skills; the final oral presentation provides evidence of advanced oral		
communicate epidemiologic	Epidemiology	communication skills and the ability to communicate to a broad audience.		
information or concepts to lay				
and professional audiences.				

Assessment of Co	mpetencies for Academic Ma	ster's Degrees in Health Services Research Policy & Administration
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Acquire and apply	PubH 6250 - Foundations of	PubH 6250: Assessed across graded discussions as well as group and
knowledge of the context of	Public Health	independent activities. Students will:
public health and health care		-participate in an Introduction Discussion in which they reflect on the primary
systems, institutions, actors,	PubH 6724 - Health Care	functions of public health and their driving values.
and environment.	System and Public Health	-complete The State of American Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burdento draw comparisons and make conclusions about health systems across national and international settings. -participate in social annotation and discussion related to MN Public Health System to examine the history and context of Minnesota's public health system and review the current Statewide Health Improvement Framework.
		PubH 6724. Students complete a group policy exercise evaluating health systems
		and provide opinions on how to effectively, and equitably, address these challenges.
2. Design and conduct health	PubH 6806 - Principles of	PubH 6806: Students design a research proposal to address a research question
services research.	Public Health Research	of their choice. In addition, students critically assess research articles through written assignments.
	PubH 6864 - Outcomes	
	Research	PubH 6864: Students design a research proposal to address a research question
		of their choice. In addition, students critically assess research articles through
	PubH 7894 - Plan B Master's Project	written assignments.
		PubH 7894: Students complete a master's research project. Students submit a
		written paper that is evaluated by a faculty committee who provide comments on
		the quality of the research. Students also complete an oral exam in which a faculty committee assesses the ability of the student to conduct research, including an
		explanation of proper methodology and data analysis. The faculty committee

Template D17-2: MS Health Services Research Policy & Administration

Assessment of Competencies for Academic Master's Degrees in Health Services Research Policy & Administration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
		decides whether the research is of high enough quality for the student to pass and receive their MS degree.	
3. Evaluate ethical issues in	PubH 6741 - Ethics in Public	PubH 6741: In a reflection post (Assignment 2), students are asked to evaluate the	
health services and public	Health Research Professional	ethical principles that underlie U.S. pandemic response and COVID-19 inequities,	
health research	Practice	and offer their perspectives on an action plan that would promote health equity. In their final paper (Final Ethics Analysis), students write an ethical analysis of a	
	PubH 6742 - Ethics in Public	public health topic, and they make a recommendation (supported by their ethical	
	Health: Research and Policy	analysis) of which of several policy options will best promote health and advance health equity.	
		PubH 6742: For the final project, students will choose an item within health or health services research item to review and/or revise.	
4. Apply statistical theory and	PubH 6450 - Biostatistics I	PubH 6450: Two comprehensive projects assess student's ability to analyze data	
research methods to health		(e.g. epidemiologic, health science) using software and students must also be able	
services research.	PubH 6451 - Biostatistics II	to interpret the results.	
		PubH 6451: Apply biostatistical techniques in a series of labs using R or SAS programming software.	

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-semestercredit course.

All MS students take PubH 6250: Foundations of Public Health. PubH 6250 includes a module on public health research, which discusses quantitative and qualitative research methods and the translation of evidence into population health improvement.

MS students in environmental health sciences, clinical research, and health services research, policy & administration are required to take at least one course in epidemiology, PubH 6320: Fundamentals of Epidemiology (3 cr) or PubH 6341: Epidemiology Methods I (3 cr). Students in these three MS programs also take PubH 6742: Ethics in Public Health - Research & Policy (1 cr). This course covers topics such as ethical challenges in human subjects' research, biomedical research, and social/behavioral research.

MS students in Biostatistics take PubH 7405: Biostatistical Inference I (4 cr), PubH 7430: Methods for Correlated Data (3 cr), and PubH 7450: Clinical Trials (3 cr).

Students who graduate with an MS in Epidemiology have completed the PhD curriculum.

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

Students conduct research in their discipline under the guidance of a faculty advisor. Students also complete a required written master's project to demonstrate their ability to conduct research in their discipline. This written project is evaluated by their examination committee. Students must also pass an oral exam. The examination committee, which includes two graduate faculty members from the program and one graduate faculty member from another program, provides comments to the students on their written master's project and further assesses their research project during the oral exam. The graduate school provides policies regarding the requirements for the final oral exam: https://policy.umn.edu/education/masterscompletion

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.

Student guidebooks can be found on the SPH website: <u>https://www.sph.umn.edu/current/resources/guidebooks/.</u>

At the University level, the Office of Institutional Compliance hold the policy within the university policy library: <u>https://policy.umn.edu/education/masterscompletion.</u>

Full copies of student guidebooks can also be found in the Electronic Resource File within the Criterion D folder, D17.6 subfolder.

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.

Samples of MS student master's projects can be found in the Electronic Resource File within the Criterion D folder. Examples are found in the D17.7 subfolder, within each specific concentration folder.

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.

All MS students are required to take PubH 6250: Foundations in Public Health (2 credits), which addresses and assesses the foundational public health knowledge domains. Students can bypass PubH 6250 if they enter the program with a bachelor's degree in public health or an MPH from a CEPH-accredited school or program in public health, or pass an equivalency exam.

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.

Syllabi and supporting documentation can be found in the Electronic Resource File within the Criterion D folder, in the D17.9 subfolder.

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

Strengths

- SPH offers a range of rigorous MS degrees. Students acquire a foundation in public health through their required coursework. Specifically, MS students are required to take PubH 6250: Foundations in Public Health, which addresses and assesses the foundational public health learning objectives. This high-quality course, rigorously and thoughtfully developed, receives excellent student evaluations. Each program also requires other courses that address public health research.
- The graduate school administers the MS degree. In each program, a faculty member serves as the director of graduate studies, provides overall guidance to MS students, and stays up-to-date with graduate school policies and procedures.

Weaknesses

• None.

D18. Academic Public Health Doctoral Degrees

These students also complete coursework and other experiences, outside of the major paper or project, that substantively address scientific and analytic approaches to discovery and translation of public health knowledge in the context of a population health framework.

These students complete doctoral-level, advanced coursework and other experiences that distinguish the school of study from a master's degree in the same field.

The school defines appropriate policies for advancement to candidacy, within the context of the institution.

Finally, students complete coursework that provides instruction in the foundational public health knowledge at an appropriate level of complexity. This instruction may be delivered through online, in-person or blended methodologies, but it must meet the following requirements while covering the defined content areas.

The school identifies at least one required assessment activity for each of the foundational public health learning objectives.

The school validates academic doctoral students' foundational public health knowledge through appropriate methods.

 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.

The School of Public Health has four PhD degrees: biostatistics, environmental health sciences, epidemiology, and health services research, policy & administration. Academic doctoral degrees in the School of Public Health are administered through the graduate school:

 <u>https://policy.umn.edu/education/doctoralperformance</u> and <u>https://policy.umn.edu/education/doctoralcompletion</u>.

A PhD degree requires at least 48 course credits; 24 earned through formal coursework and 24 by taking PubH 8888: Doctoral Thesis Credits. Progress through the PhD program requires passing a preliminary written exam, which typically takes the form of a grant proposal, a preliminary oral exam, conducting original research, writing a dissertation, and passing a final oral exam/thesis defense. The examination committee includes at least three graduate faculty members from the program and one graduate faculty member from another program. We identify all academic PhD degree programs by degree and area of specialization in the Instructional Matrix (Table Intro-1).

In general, the pursuit of extensive independent and original research distinguishes the PhD degree from the MS degree. Such research involves formulating a hypothesis, developing the methodology to test the hypothesis, interpreting the results, revising the research plan as appropriate, and publishing journal articles based on the research. Our PhD programs place emphasis on developing independent researchers. This is reflected in the requirement of PhD students to take 24 credits of PubH 8888: Doctoral Thesis Credits. Doctoral students must take 12 credits of formal coursework while enrolled in the PhD program; doctoral students can transfer in credits from a master's degree program, but they can only count 12 of those transfer credits as part of the total 24 required credits of formal coursework. Sample student course of study plans can be found in the Electronic Resource File, Criterion D folder, D18.1 subfolder.

The table below highlights the courses required for PhD students, but not MS students, in each program. Doctoral students in environmental health sciences choose electives, in consultation with their advisors, which represent coursework that is distinguished from the requirements for the MS degree. Doctoral students whose research is either laboratory based or field-work based may take fewer courses that are different from MS coursework. This is because laboratory based or field-work based research methods change quickly and students learn them in the process of conducting their research. Traditionally, these disciplines emphasize learning through conducting research, rather than learning through coursework. By contrast, students who conduct other types of research learn advanced methodology through coursework.

Biostatistics

Requirements and information for a doctoral degree in biostatistics can be found on the SPH website: <u>https://www.sph.umn.edu/academics/degrees-programs/phd/biostatistics/</u>. Note that all students take the same set of core courses on one of two tracks: one track for students who enter the program with a master's degree in biostatistics and a separate track for those who do not.

Biostatistics PhD Curriculum Requirements (53 cr)
Core Requirements (43 cr) PubH 6250 Foundations of Public Health (2 cr) PubH 7450 Survival Analysis (3 cr) PubH 8401 Linear Models (4 cr) PubH 8403 Biostatistical Research Mentoring (1 cr) PubH 8412 Advanced Statistical Inference (3 cr) PubH 8432 Probability Models (3 cr) PubH 8442 Bayesian Decision Theory (3 cr) PubH 8888 Doctoral Thesis Credits (24 cr)
Electives (9 cr) PubH 7420 Clinical Trials (3 cr) PubH 7465 Biostatistical Consulting (3 cr) PubH 8422 Modern Non-parametrics (3 cr) PubH 8445 Statistics for Human Genetics (3 cr) PubH 8446 Advanced Statistical Genetics & Genomics (3 cr) PubH 8452 Longitudinal Data Analysis (3 cr) PubH 8462 Advanced Survival Analysis (3 cr) PubH 8462 Advanced Survival Analysis (3 cr) PubH 8472 Spatial Biostatistics (3 cr) PubH 8475 Statistical Learning and Data Mining (3 cr) PubH 8482 Sequential Clinical Trials (3 cr) PubH 8485 Methods for Causal Inference (3 cr) PubH 8492 Richly Parameterized Linear Models (3 cr) Other 8000-level Biostatistics or School of Statistics courses that are not in the core curriculum

Health Science Elective (1 cr)

One additional health science course must be selected from PubH 6xxx, 7xxx, 8xxx level courses offered by the School of Public Health or other Health Science programs.

Additional Course Requirements for Students without a Statistics/Biostatistics Master's Degree (17 cr) MATH 5615H Introduction to Analysis I (4 cr) PubH 7405 Biostatistical Inference I (4 cr) PubH 7406 Biostatistical Inference II (3 cr) STAT 8101 Theory of Statistics I (3 cr) STAT 8102 Theory of Statistics II (3 cr)

Environmental Health Sciences

Requirements and information for a doctoral degree in environmental health sciences can be found on the SPH website: <u>https://www.sph.umn.edu/academics/degrees-programs/phd/enhs/.</u> Note that all students take the same set of core courses, with seven emphasis areas for students to choose from.

Environmental Health Sciences PhD Curriculum Requirements (48 cr)

Core Requirements (28 cr) PubH 6250 Foundations of Public Health (2 cr) PubH 6741 Ethics in Public Health: Professional Practice & Policy (1 cr) or PubH 6742 Ethics in Public Health: Research & Policy (1 cr) PubH 8120 Occupational Health & Safety Research Seminar (1 cr) PubH 8888 Doctoral Thesis (24 cr)

Students choose electives, in consultation with their advisors, that represent advanced coursework and are necessary to pursue their research projects. The full selection of coursework options are found in the UMN catalog. Students may select a set of electives that are grouped by specialty area.

Epidemiology

Requirements and information for a doctoral degree in epidemiology can be found on the SPH website: <u>https://www.sph.umn.edu/academics/degrees-programs/phd/epidemiology/.</u> All students take the same set of core courses, and there are two tracks for students who wish to follow either a social/behavioral track or a clinical/biological track.

Epidemiology PhD Curriculum Requirements (61 cr)

Core Requirements for PhD in Epidemiology (40-42 cr) PubH 6250 Foundations of Public Health (2 cr) PubH 6348 Writing Research Grants (2 cr) PubH 7401 Fundamentals of Biostatistical Inference (4 cr) PubH 8341 Advanced Epidemiologic Methods: Concepts (3 cr) PubH 8342 Advanced Epidemiologic Methods: Applications (3 cr) PubH 8345 How to be an Anti-racist Epidemiologist (1 cr) PubH 8888 Doctoral Thesis Credits (24 cr) GRAD 8101 Teaching in Higher Education (3 cr) or GRAD 8200 Teaching & Learning Topics in Higher Education: Teaching for Learning (1 cr)

Epidemiology PhD offers two tracks (below). Please note that tracks refer to official University subplans. A sub-plan is a formally designated, distinct content area within a single, broader discipline (e.g., program or concentration) that appears on the official University transcript. For example, the transcript for a student earning a master's degree in epidemiology will indicate both the program (epidemiology) and the sub-plan (social/behavioral).

Social/Behavioral Track	Clinical/Biological Track
Behavioral Methods/Statistics (6 cr)	Behavioral Methods/Statistics (6 cr)
PubH 7420 Clinical Trials: Design,	PubH 7420 Clinical Trials: Design,
Implementation, & Analysis (3 cr)	Implementation, & Analysis (3 cr)
Minimum 3 credits from the following:	Minimum 3 credits from the following:
PubH 6915 Nutrition Assessment (2 cr)	PubH 6915 Nutrition Assessment (2 cr)
PubH 7402 Biostat Modeling & Methods (4 cr)	PubH 7402 Biostat Modeling & Methods (4 cr)
PubH 7405 Biostat Inference I (4 cr)	PubH 7405 Biostatistics: Regression (4 cr)
PubH 7406 Biostat Inference II (3 cr)	PubH 7406 Adv Regression & Design (4 cr)
PubH 7430 Stats Methods for Corr. Data (3 cr)	PubH 7430 Stats Methods for Corr. Data (3 cr)
PubH 8343 Synthesis & Application of Methods in	PubH 7445 Statistics for Human Genetics &
Epi Research (3 cr)	Molecular Biology (3 cr)
PubH 8344 Adv Epi Methods Workshop (1 cr)	PubH 8141 Doctoral Seminar in Observational
PubH 8804 Adv Quant Methods Seminar (3 cr)	Inference (2 cr)
	PubH 8343 Synthesis & Application of Methods in
Content Area Courses (4 cr)	Epi Research (3 cr)
PubH 6333 Human Behavior I (2 cr)	PubH 8344 Adv Epi Methods Workshop (1 cr)
PubH 6334 Human Behavior II (2 cr)	PubH 8804 Adv Quant Methods Seminar (3 cr)
Electives (13 cr)	Content Area Courses (4 cr)
PubH 6074 Mass Communication & Public Health	PubH 6140 Occ & Env Epidemiology (2 cr)
(3 cr)	PubH 6381 Genetics in Public Health (2 cr)
PubH 6078 Public Health Policy as a Prevention	PubH 6385 Epi & Control of Inf Diseases (2 cr)
Strategy (2 cr)	PubH 6386 CVD Epi & Prevention (2 cr)
PubH 6094 Interventions to Address Weight-	PubH 6387 Cancer Epidemiology (2 cr)
Related Health & Eating Disorders (2 cr)	PubH 6389 Nutritional Epidemiology (2 cr)
PubH 6370 Social Epidemiology (2 cr)	
PubH 6381 Genetics in Public Health (2 cr)	Electives (13 cr)
PubH 6385 Epi & Control of Inf Disease (2 cr)	PubH 6355 Pathophys of Human Disease (4 cr)
PubH 6386 CVD Epi & Prevention (2 cr)	PubH 7391 Independent Study: Epi (1-4 cr)
PubH 6387 Cancer Epidemiology (2 cr)	PubH 7392 Readings in Epidemiology (1-4 cr)
PubH 7391 Independent Study: Epi (1-4 cr)	PubH 7405 Biostatistics: Regression (4 cr)
PubH 7392 Readings in Epidemiology (1-4 cr)	PubH 7406 Advanced Regression & Design (4 cr)
PubH 7405 Biostat Inference I (4 cr)	PubH 7430 Statistical Methods for Correlated
PubH 7406 Biostat Inference II (3 cr)	Data (3 cr)
PubH 8343 Synthesis & Application of Methods in	PubH 7445 Statistics for Human Genetics &
Epi Research (3 cr)	Molecular Biology (3 cr)
PubH 8344 Adv Epi Methods Workshop (1 cr)	PubH 7450 Survival Analysis (3 cr)
	PubH 8343 Synthesis & Application of Methods in
	Epi Research (3 cr)
	PubH 8344 Adv Epi Methods Workshop (1 cr)
	VMed 5180 Ecology of Infectious Diseases (3 cr)
	VMed 8090 Epidemiology of Zoonoses (2 cr)

Health Services Research Policy & Administration

Requirements and information for a doctoral degree in health services research policy and administration can be found on the SPH website: <u>https://www.sph.umn.edu/academics/degrees-programs/phd/hsrpa/.</u> Note that all students take the same set of core courses, with six emphasis areas to choose from. Students work closely with their advisors to select electives to suit their interests.

HSRPA PhD Curriculum Requirements (72-81 cr)

<u>Core Requirements (58 cr)</u> PubH 6250 Foundations of Public Health (2 cr)
PubH 6735 Principles of Public Health Policy (3 cr)
PubH 6742 Ethics in Public Health: Research & Policy (1 cr)
PubH 6832 Economics of the Health Care System (3 cr)
PubH 6855 Medical Sociology (3 cr)
PubH 7401 Fundamentals of Biostatistical Inference (4 cr) and
PubH 7402 Biostatistical Modeling & Methods (4 cr) -or-
APEC Econometric Analysis (ApEC 8211, 8212, 8213, 8214 8 cr)
PubH 8341 Advanced Epidemiological Methods (3 cr)
PubH 8801 Health Services Policy Analysis (1 cr)
PubH 8810 Research Studies in Health Care (3 cr)
PubH 8811 Research Methods in Health Care (3 cr)
PubH 8830 Writing for Research (2 cr)
PubH 8831 Writing for Research (2 cr)
PubH 8888 Doctoral Thesis Credits (24 cr)

Students choose electives in consulation with their advisors.

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.

All PhD students are required to take PubH 6250: Foundations in Public Health, which addresses and assesses the foundational public health knowledge domains. Students can bypass PubH 6250 if they enter the program with a bachelor's degree in public health or an MPH from a CEPH-accredited school or program in public health, or pass an equivalency exam.

Please find the full D18-1 template in the Electronic Resource File, Criterion D folder, within the D18.2 subfolder.

Content Coverage for all PhD programs		
1. Explain public health history, philosophy and values.	PubH 6250 - Foundations of Public Health	 Assessed across graded discussions as well as group and independent activities. Students will: participate in an Introduction Discussion in which they reflect on the primary functions of public health and their driving values. complete the Content Quiz which includes seven questions focused on this competency: 1) All of the following are tenets of Global Health 3.0, described in Dr. Prasad's lecture, EXCEPT (multiple choice); 2) According to the CDC Foundation, public health is concerned with protecting the health of entire populations, which it defines as being a minimum of 10,000 people, (true/false); 3) Lucy, Anarcha, and Betsey are now recognized as (multiple choice); 4) The racist, false beliefs about assumed biological pain rating differences between Black and white patients that informed the work of James Marion Sims in the 1800s persist today, (true/false); 5) All of the following are true about "Typhoid Mary", EXCEPT (multiple choice); 6) Which of the following is true of the 1932 Tuskegee Study of Untreated Syphilis (TSUS) in the Negro Male? (multiple choice); and 7) "Governments, globally, have upheld human rights and global governance, demonstrating effective solidarity throughout the COVID-19 pandemic" (true/false). compose a Foundations of Public Health Op-Ed on any topic related to what they believe is needed in order for public health to achieve and advance health equity and improve health in diverse populations; students will also submit a written reflection and describe the ways that their Op-Ed aligns with public health history, philosophy and/or values, citing evidence from course content.

Template D18-1: Biostatistics, Environmental Health, Epidemiology, HSRPA

2. Identify the core functions of public health and the 10 Essential Services.*	PubH 6250 - Foundations of Public Health	 Assessed through graded discussions and independent activities. Students will: complete the Content Quiz which includes three questions focused on this competency: 1) The 10 Essential Public Health Services framework was updated in 2020, which centers (multiple choice); 2) All of the following are part of the core functions of public health EXCEPT (multiple choice); and 3) Which of the following is an example of Public Health's core function of Assurance toward addressing health equity? (multiple choice). complete the Our Connected World Discussion in which they respond to two peers by naming a particular core function or essential service that was applied by their peer and describe how.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete the Content Quiz which includes four questions focused on this competency: 1) Strictly quantitative analyses have provided promising climate-health insights and adequately capture local contexts and culturally-specific experiences (true/false); 2) All of the following are common examples of qualitative methods EXCEPT (multiple choice); 3) A primary aim of quantitative research in public health is to (multiple choice); and 4) In qualitative research, the questions are most often (multiple choice).
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program.	PubH 6250 - Foundations of Public Health	 Assessed through group and independent activities. Students will: complete The State of U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burdento draw comparisons and make conclusions about health systems across national and international settings. compose and share an Advocacy for Equity Letter or Video on a topic from an instructor-provided list of recent public health policy issues, specifically naming relevant causes and trends of population health morbidity and mortality associated with the topic and evaluating policy's potential impact.
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete the Content Quiz which includes three questions focused on this competency: 1) Regular mammograms are used to detect breast cancer at an early stage, thereby increasing the likelihood of receiving the most effective forms of treatment. This is an example of which level of prevention? (multiple choice); 2) In Dr. Camara Jones' analogy of the Cliff of Good Health, tertiary prevention is represented by (multiple choice); and 3) Which of the following is an example of a primary prevention strategy that addresses a social determinant of health? (multiple choice).

		• participate in the Our Connected World group learning activity in which students will apply and demonstrate your understanding of the impacts of globalization on population health as well as the interconnectedness of human, animal, and environmental health, completing and sharing a table in which they identify public health interventions at each level of prevention and describe why their intervention fits that level of prevention.
6. Explain the critical importance of evidence in advancing public health knowledge.	PubH 6250 - Foundations of Public Health	 Assessed through group and independent activities. Students will: participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence. participate in the Health Communication group learning activity in which they review a published public health Op-Ed and evaluate whether or not it achieved the basic, expected components of this writing style; students will discuss and defend whether or not they perceive an Op-Ed to have provided evidence in a way that advances public health knowledge. compose and share an Advocacy for Equity Letter or Video on a topic from an instructor-provided list of recent public health policy issues. Briefly describe the primary evidence, knowledge, and/or experiences that have shaped your opinion. compose a Foundations of Public Health Op-Ed on any topic related to what they believe is needed in order for public health to achieve and advance health equity and improve health in diverse populations, provide persuasive evidence supporting their thesis throughout; students will also submit a written reflection discussing how effectively and thoroughly they achieved the goal to leverage evidence to advance their public health knowledge.
7. Explain effects of environmental factors on a population's health.	PubH 6250 - Foundations of Public Health	 Assessed through group activities. Students will: participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence. participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.

8. Explain biological and genetic factors that affect a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.
		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
9. Explain behavioral and psychological factors that affect a population's health.	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete The State of U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burdento draw comparisons and make conclusions about health systems across national and international settings.
		• participate in the What Creates Health? group learning activity in which they will apply and demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.
		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
10. Explain the social, political and economic determinants of health and how they contribute to population health and health	PubH 6250 - Foundations of Public Health	Assessed through group and independent activities. Students will: • complete The State of U.S. Health Care worksheet in which they analyze health care systems among the factors and determinants that affect a population's healthsummarizing health system organization and capacity; access and utilization; expenditure; and health status and disease burdento draw comparisons and make conclusions about health systems across national and international settings. • participate in the What Creates Health? group learning activity in which they will apply and
inequities.		demonstrate knowledge of the diverse factors related to human population health and practice supporting ideas with evidence.

		• participate in Intersectionality and Public Health group learning activity in which they discuss the impacts of structural biases, social inequities, and other oppressions at the individual, community, societal, and organizational level; students will examine and discuss case studies and be assigned to name the evident environmental, biological or genetic, behavioral or psychological, and the social, political and economic factors and determinants.
11. Explain how globalization affects global burdens of disease.	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the Our Connected World group learning activity in which students will apply and demonstrate your understanding of the impacts of globalization on population health as well as the interconnectedness of human, animal, and environmental health; specifically, they will describe one or more way(s) that globalization affects population health, considering impacts on disease burdens or trends as well as health disparities and inequitiesciting course content.
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health).	PubH 6250 - Foundations of Public Health	Assessed through group activities. Students will: • participate in the Our Connected World group learning activity in which students will apply and demonstrate your understanding of the impacts of globalization on population health as well as the interconnectedness of human, animal, and environmental health; specifically, they will describe one or more way(s) that the connections among human health, animal health and ecosystem health affect population health, considering obstacles and/or opportunities related to the overlapping health of living thingsciting course content.

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.

The full D18-2 tables (by concentration) can be found in the Electronic Resource File, Criterion D folder, D18.3 subfolder.

Template D18-2: Biostatistics

Assessment of Competencies for Doctoral Degrees in Biostatistics		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Apply probability and statistical theory to understand the uses and limitations of existing and new statistical analysis methods.	PubH 8401 - Linear Models PubH 8412 - Advanced Inference	PubH 8401: As part of weekly assignments, students apply statistical theory concepts to demonstrate the properties of a variety of regression techniques.
	PubH 8442 - Bayesian Decision Theory	 PubH 8412: As part of weekly assignments, students use techniques from statistical theory to rigorously prove the properties of advanced statistical estimation methods, and show how these properties might change under different data-generating scenarios. PubH 8442: As part of weekly assignments and exams, students apply statistical theory concepts to demonstrate the properties of Markov Chains, the Poisson Process, and Gaussian Processes.
2. Develop and disseminate novel statistical methods.	PubH 8403 - Biostat Research Mentoring PubH 8888 - Doctoral Thesis Credits	 PubH 8403: Students show their ability to make use of key research support tools and resources by completing weekly assignments that represent smaller versions of the challenges they are likely to face in writing their dissertations. Assignments are evaluated based on how well the relevant tool or resources has been applied. PubH 8888: The dissertation consists of three publishable papers, each of which is expected to contribute to the development and dissemination of novel statistical methods. The dissertation committee consisting of four faculty assess the dissertation for the rigor and presentation of the methods proposed.

Assessment of Competencies for Doctoral Degrees in Biostatistics			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
3. Choose, justify, and carry out data	PubH 7405 - Biostatistics	PubH 7405 & 7406: As part of weekly assignments, students complete	
analysis methods including descriptive	Regression	small, self-contained data analyses in which they are provided with a real	
statistics and visualizations,		dataset and asked to apply an appropriate regression method to answer	
estimation (point and interval),	PubH 7406 - Advanced	a scientific question of interest. Students are assessed on the	
hypothesis testing, regression,	Regression and Design	appropriate choice and execution of the method.	
methods for time-to-event data, non-			
parametric and resampling/re-	PubH 7450 - Survival Analysis	PubH 7450: As part of weekly assignments, students complete data	
randomization methods. Use both		analyses in which they are provided with a real dataset with time-to-event	
frequentist and Bayesian methods as		data and asked to apply an appropriate survival analysis method to	
appropriate to analyze data.		answer a scientific question of interest. Students are assessed on the	
		appropriate choice and execution of the method.	
4. Advise on the ethical design,	PubH 7420 - Clinical Trials	PubH 7420: Students work in interdisciplinary teams to write a complete	
conduct, and analysis of research		research study protocol; teams must determine appropriate study design,	
studies as part of an interdisciplinary	PubH 8888 - Doctoral Thesis	sample size, and statistical tests. Together, students are asked to rely on	
research team.	Credits	each other's areas of expertise to implement study protocols and conduct	
		a clinical research study, concluding with data cleaning and analysis of	
		collected information. Students are assessed on the design concept for	
		the study as well as the completeness and appropriateness of the	
		statistical analysis plan.	
		PubH 8888: In the course of dissertation work, a student will collaborate	
		with the non-statisticians who provide the data or research problem of interest.	

Assessment of Competencies for Doctoral Degrees in Biostatistics		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
5. Interpret and communicate the	PubH 7405 - Biostatistics	PubH 7405: Students collaborate to prepare final group presentations
results of both data analyses and	Regression	where they summarize and present the statistical analysis methods and
statistical methods research.		results from two recent papers in the biomedical literature that use
	PubH 8888 - Doctoral Thesis	regression.
	Credits	
		PubH 8888: Students demonstrate their writing skills through the
		preliminary written exam and the final thesis. Students demonstrate their
		oral communication skills through their preliminary oral exam and
		through their thesis defense. All of these assessments are reviewed by
		faculty committees who give the students feedback on their
		presentations.

Template D18-2: Environmental Health Sciences

Assessment of Competencies for Doctoral Degrees in Environmental Health Sciences		
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ
1. Integrate analysis of scientific literature and preliminary data to develop a hypothesis-driven approach to an environmental health research question.	PubH 8888 - Doctoral Thesis Credits	PubH 8888: The preliminary written exam takes the form of a grant proposal in which the student demonstrates the ability to design studies that meet the highest standards in research ethics. The final PhD thesis also demonstrates ability to conduct research that meets the highest ethical standards, including data collection and analysis. Both the preliminary written exam and the final thesis are reviewed by faculty committees. The faculty committee determines whether the written exam needs to be revised or whether the student passes without revisions.

Assessment of Competencies for Doctoral Degrees in Environmental Health Sciences			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
2. Ethically conduct	PubH 8888 - Doctoral	PubH 8888: The preliminary written exam takes the form of a grant proposal in which	
independent environmental health research.	Thesis Credits	the student demonstrates the ability to design studies that meet the highest standards in research ethics. The final PhD thesis also demonstrates ability to conduct research that meets the highest ethical standards, including data collection and analysis. Both the preliminary written exam and the final thesis are reviewed by faculty committees. The faculty committee determines whether the written exam needs to be revised or whether the student passes without revisions.	
3. Communicate your	PubH 8888 - Doctoral	PubH 8888: Students demonstrate their writing skills through the preliminary written	
research contributions	Thesis Credits	exam and the final thesis. Students demonstrate their oral communication skills through	
through written and oral		their preliminary oral exam and through their thesis defense. All of these assessments	
presentations to researchers in	PubH 8120 - Occupational Health and Safety	are reviewed by faculty committees who give the students feedback on their presentations.	
environmental health and	Research Seminar		
other related fields.	PubH 8160 - Advanced Toxicology	PubH 8120: Students demonstrate their oral communication skills by giving oral presentations in class on research, which are evaluated by faculty who provide students with comments.	
		PubH 8160: Students demonstrate their oral presentation skills through a series of presentations give to the class on toxicological research. The presentations are assessed and graded by faculty instructors.	

Template D18-2: Epidemiology

Assessment of Competencies for Doctoral Degrees in Epidemiology			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Apply epidemiologic and	PubH 8341 - Advanced	PubH 8341: Students complete eight homework assignments on topics related to	
biostatistical research skills	Epidemiologic Methods:	epidemiologic inference, measures of effect and association, counterfactuals, effect	
	Concepts	modification, confound and DAGs, bias, hypothesis testing and epidemiologic study	
		design.	
	PubH 8342 - Advanced		
	Epidemiologic Methods:	PubH 8342: Students complete 8 homework assignments, which assess skills in	
	Applications	applying various biostatistical modeling methods to epidemiologic data; students submit	
		a final project based on an analysis technique and unique dataset in publication format.	
		The final project tests student's understanding of statistical methods and demonstrates	
		analytical skills.	
2. Formation of scholarly	PubH 6348 - Writing	PubH 6348: By preparing a grant proposal, students ask a fundamental research	
independence:	Research Grants	question, moving from an initial idea to a fully developed grant application, that if funded	
- Creation of basic or		would advance the field. In weekly assignments, students create each section of a grant	
applied knowledge through	PubH 8888 - Doctoral	proposal and receive instructor feedback to incorporate into the final proposal. Students	
original research or	Thesis Credits	work collaboratively to provide proposal feedback to their peers and participate in a	
synthesis that advances the		mock grant review panel.	
field			
- Ability to ask fundamental		PubH 8888: The dissertation requires students to identify a gap in scientific knowledge	
questions		and then propose a research question and design an original epidemiologic study that	
- Responsible stewardship		will transmit knowledge to advance the field. Successful completion of a written thesis	
of key ideas of field		and the oral defense documents the students' mastery of a content area.	
- Able to challenge existing			
thinking			
- Able to transmit			
knowledge to others to			
advance the field			
- Mastery of a content area			

Assessment of Competencies for Doctoral Degrees in Epidemiology			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
3. Apply written and oral communication skills to disseminate epidemiological research.	Grad 8101 - Teaching in Higher Education OR Grad 8200 - Teaching and Learning Topics in Higher Education: Teaching for LearningAn Online Course	Grad 8101: Students are assessed based on the creation of a teaching dossier, which includes a curriculum vitae, course syllabus, and teaching philosophy reflecting their beliefs about learning and teaching. Students prepare brief presentations and teach one class session as part of a team; students take a final examination that integrates course design and teaching work throughout the semester. Grad 8200: Students are assessed on their weekly discussion conversations on strategies for best practices in teaching; students demonstrate readiness to teach by creating a syllabus for a future course that integrates the principles of student engagement, active learning and a learning-centered approach; students provide a teaching philosophy reflecting their beliefs about learning and teaching. Preparing and delivering a lecture - students are evaluated on preparation and delivery of a 50-minute lecture in a course offered in Epidemiology, demonstrating ability to communicate and teach in a formal educational setting.	
 4. Leadership and collaborative skills: Skill in team approaches to problem solving Development of integrative skills to improve collaboration and problem solving across disciplines Ability to share knowledge in participatory research Ability to apply intercultural knowledge in team-building 	PubH 8888 - Doctoral Thesis Credits	PubH 8888: By working with their dissertation committee, and research teams (either established or formed for purpose of student's dissertation), the student learns the importance of collaboration and problem solving; depending on the student's dissertation topic, they may pursue research that requires intercultural knowledge and participatory research. Students' skills in this competency are assessed by successful completion and defense of their dissertation.	

Assessment of Competencies for Doctoral Degrees in Epidemiology			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
5. Professional	PubH 8345 - How to be an	PubH 8888: Students are required to have their dissertation research reviewed and	
responsibility:	Anti-racist Epidemiologist	approved by an institutional review board, thereby demonstrating adherence to	
- Awareness of civic		conducting research in an ethical manner. Students demonstrate the development of a	
responsibilities and broad	PubH 8888 - Doctoral	professional perspective and scholarly identity by the depth of their dissertation in a	
outlook on societal	Thesis Credits	specific content area related to epidemiology and public health.	
implications of research			
- Ability to conduct research		PubH 8345: Students in 8345 hold civic responsibility in epidemiologic research and the	
in ethical and responsible		course will encourage students to deeply assess the societal implications of their	
manner, with commitment		research, from study design thru to analysis and interpretation. Students will examine	
and integrity		and participate in graded discussions of multiple historical and present day research	
- Development of a		examples that have broad societal implications beyond just the research itself. This	
professional perspective		deep examination of research principles will foster the student's ability to conduct ethical	
and scholarly identity		research in the 21st century.	
6. Personal and	PubH 8888 - Doctoral	PubH 8888: The dissertation experience demonstrates the student's ability to achieve	
professional management	Thesis Credits	long term goals (doctoral training is ~ 5 years on average); as the outcome of a	
skills:		dissertation may be uncertain or pose complex problems, students learn management	
- Ability to persist in		skills and apply flexibility; successful students who are self-motivated and able to	
achieving long term goals		demonstrate progress toward a PhD with minimal supervision complete their	
- Ability to manage projects		dissertation in a timely manner and pass their final oral defense.	
with uncertain outcomes			
- Ability to be flexible and			
adaptable in approaching			
complex and uncertain			
problems			
- Being self-motivated and			
autonomous			
- Ability to achieve results			
with minimum supervision			

Assessment of Competencies for Doctoral Degrees in Health Services Research, Policy & Administration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
1. Foundational Knowledge: Acquire and apply knowledge of the context of health and health care systems, institutions, actors, and environment. Domain examples include: cost & financing, organization, health policy, social determinants & resource allocation.	PubH 6735 - Principles of Health Policy PubH 8801 - Health Services Policy: Analysis	PubH 6735: Critically assess and apply health policy to problems in health services and public health, students are evaluated with assignments that require them to contact a legislator about a policy topic, define a policy topic, write an issue brief for a policy audience, prepare and deliver a elevator speech about their topic, submit an op-ed for a lay audience, and write a policy proposal that analyzes solutions. PubH 8801: Students prepare responses to 3-5 discussion guestions posed by the teaching team. applying the key	
2. Conceptual Knowledge: Apply theoretical and conceptual models relevant to health services research. Domain examples include: economics, epidemiology, sociology, implementation science, political science, multi-disciplinary theory construction.	PubH 6832 - Economics of the Health Care System PubH 6855 - Medical Sociology	concepts of the course to their particular research interests. PubH 6832: Students prepare congressional testimony for or against a policy using economic theory and empirical evidence. PubH 6855: Students complete 4 reaction papers critically examining theoretical perspectives in the sociology of health and illness. Through a series of two peer reviewed application papers, students apply major sociological frameworks to understand a health services/public health problem of their choice.	
3. Relevant and important HSR Question Development: Propose important research questions informed by structured evidence assessment, stakeholder positions, pertinent theoretical and conceptual models and new	PubH 8801 - Health Services Policy Analysis PubH 8810 - Research	PubH 8801: Students prepare responses to 3-5 discussion questions posed by the teaching team, applying the key concepts of the course to their particular research interests.	

Template D18-2: Health Services Research Policy & Administration

Assessment of Competencies for Doctoral Degrees in Health Services Research, Policy & Administration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
data; and formulate solutions to health problems,	Studies in Health Care	PubH 8810: Students review the application of one method in	
practice and policy. Domain examples include: scientific		a critical analysis of peer-reviewed research. They also	
method and theory, proposal development, health policy		develop a research proposal to address a health	
application, questions leading to solutions to health problems.		services/public health research question.	
4. Conceptual and operational models: Develop a	PubH 8341 - Advanced	PubH 8341: Students complete eight homework assignments	
conceptual model to specify study constructs for a	Epidemiological Methods:	on topics related to epidemiologic inference, measures of	
health services research question and develop variables	Concepts	effect and association, counterfactuals, effect modification,	
that reliably and validly measure these constructs.		confound and DAGs, bias, hypothesis testing and	
Domain examples include:	PubH 8810 - Seminar:	epidemiologic study design.	
scientific methods and theory, measurement and	Research Studies in		
variables, concept models, and theories and criteria for	Health Care	PubH 8810: Students review the application of one method in	
causal inference.		a critical analysis of peer-reviewed research. They also	
		develop a research proposal to address a health	
		services/public health research question.	
5. Study Designs: Analyze the strengths and	PubH 8341 - Advanced	PubH 8341: Students complete eight homework assignments	
weaknesses of study designs to appropriately address	Epidemiologic Methods:	on topics related to epidemiologic inference, measures of	
specific health services research questions. Domain	Concepts	effect and association, counterfactuals, effect modification,	
examples include: longitudinal designs, survey		confound and DAGs, bias, hypothesis testing and	
research, qualitative designs, quantitative designs,	PubH 8810 - Research	epidemiologic study design.	
mixed-methods.	Studies in Health Care		
		PubH 8810: Students review the application of one method in	
	PubH 8811 - Research	a critical analysis of peer-reviewed research. They also	
	Studies in Health Care	develop a research proposal to address a health	
		PubH 8811: Students complete six computer assignments	
		using software such as R.	

Assessment of Competencies for Doctoral Degrees in Health Services Research, Policy & Administration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
6. Data collection and management methods: Sample and collect primary health and health care data and/or assemble and manage existing data from public and private sources. Domain examples include: survey research, sampling, qualitative research, operations research, data acquisition, database management, quality control.	PubH 8810 - Research Studies in Health Care PubH 8888 - Doctoral Thesis Credits	 PubH 8810: Students review the application of one method in a critical analysis of peer-reviewed research. They also develop a research proposal to address a health services/public health research question. PubH 8888: All students complete a written preliminary examination in HSR methodology. The final PhD thesis demonstrates ability to design and conduct research that meets the highest ethical standards, including data collection and analysis. Both the preliminary written exam and the final thesis are reviewed by faculty committees. The faculty committee determines whether the written exam needs to be 	
7. Research conduct management: Execute and document procedures that ensure the reproducibility of the science, the responsible use of resources, the ethical treatment of research subjects. Domain examples include: responsible conduct of research, ethics, human subjects/IRB, data acquisition, research study management.	PubH 8830/31 - Writing for Research PubH 8888 - Doctoral Thesis Credits	 PubH 8830/31: Students develop a research proposal designed to be the basis for their dissertation proposal. The final proposal contains a literature review, a conceptual model, data sources and analysis plan. PubH 8888: All students complete a written preliminary examination in HSR methodology. The final PhD thesis demonstrates ability to design and conduct research that meets the highest ethical standards, including data collection and analysis. Both the preliminary written exam and the final thesis are reviewed by faculty committees. The faculty committee determines whether the written exam needs to be revised or whether the student passes without revisions. 	
8. Data Analysis: Demonstrate proficiency in the appropriate application of analytical techniques to evaluate HSR questions. Domain examples include: economic evaluation, including CEA, statistical analyses, decision science, sampling weights, qualitative analytic methods, quantitative analytic	PubH 7401 - Fundamentals of Biostatistical Inference PubH 7402 - Biostatistics Modeling and Methods	PubH 7401: Students are assessed on probability and statistical inference via ten homework assignments; in-class activities provide opportunities for students to work out examples and investigate concepts, using R programming language.	

Assessment of Competencies for Doctoral Degrees in Health Services Research, Policy & Administration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
methods.		PubH 7402: Using R/SAS/Stata students analyze data through short assignments and a group project that uses data to test hypotheses.	
9. Professional Development: Work collaboratively in teams within disciplines, across disciplines, and/or with stakeholders. Domain examples include: teamwork,	PubH 6735 - Principles of Health Policy	PubH 6735: To critically assess and apply health policy to problems in health services and public health, students are required to engage with a legislator about a policy topic, write	
project management.	Thesis Credits	an issue brief for a policy audience, and submit an op-ed for a lay audience	
		PubH 8888: By working with their dissertation committee and research teams, the student learns the importance of collaboration and problem solving. Students' skills in this competency are assessed by successful completion and defense of their dissertation.	
10. Communication: Effectively communicate the process, findings, and implications of health services research through multiple modalities with stakeholders. Domain examples include: proposal development,	PubH 6832 - Economics of the Health Care System	PubH 6832: Students prepare (written and oral) congressional testimony for or against a policy using economic theory and empirical evidence.	
dissemination, oral and written communication skills, marketing and persuasion techniques.	PubH 8830/31 - Writing for Research	PubH 8830/8831: Students develop a research proposal designed to be the basis for their dissertation proposal. The final proposal contains a literature review, a conceptual model,	
	PubH 8888 - Doctoral Thesis Credits	data sources and analysis plan.	
		PubH 8888: Students demonstrate their writing skills through the preliminary written exam and the final thesis. Students	
		demonstrate their oral communication skills through their preliminary oral exam and through their thesis defense. Students are expected to publish at least 3 peer-reviewed	
		articles while in the program (1 first authored) and they are supported to attend professional conferences; they receive an annual evaluation of progress from their advisor as well as the	
		Director of Graduate Studies. All of these assessments are	

Assessment of Competencies for Doctoral Degrees in Health Services Research, Policy & Administration			
Competency	Course number(s) and name(s)	Describe specific assessment opportunity ⁿ	
		reviewed by faculty committees who give the students	
		feedback on their presentations.	
11. Knowledge transfer: Translate knowledge to policy	PubH 6735 - Principles of	PubH 6735: To critically assess and apply health policy to	
and practice. Domain examples include: evidence-	Health Policy	problems in health services and public health, students are	
based practice, implementation science, translational		evaluated with assignments that require them to contact a	
research.	PubH 8888 - Doctoral	legislator about a policy topic, define a policy topic, write an	
	Thesis Credits	issue brief for a policy audience, prepare and deliver an	
		elevator speech about their topic, submit an op-ed for a lay	
		audience, and write a policy proposal that analyzes solutions.	
		PubH 8888: Students demonstrate their writing skills through the preliminary written exam and the final thesis. Students demonstrate their oral communication skills through their preliminary oral exam and through their thesis defense. Students are expected to publish at least 3 peer-reviewed articles while in the program (1 first authored) and they are supported to attend professional conferences; they receive an annual evaluation of progress from their advisor as well as the Director of Graduate Studies. All of these assessments are reviewed by faculty committees who give the students feedback on their presentations.	

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.

All PhD students take PubH 6250: Foundations in Public Health (2 cr). PubH 6250 includes a module on public health research, which discusses quantitative and qualitative research methods and the translation of evidence into population health improvement. Furthermore, doctoral students in environmental health sciences and HRSPA take PubH 6742: Ethics in Public Health - Research & Policy (1 cr). This course covers topics such as ethical challenges in human subjects' research, biomedical research, and social/behavioral research

All of the PhD degrees in the SPH focus on research within a public health context. Specific courses that address public health research include the following:

Biostatistics

PubH 7450 Clinical Trials (3 credits). Students who enter the PhD program without an MS are also required to take PubH 7405 Biostatistical Inference I (4 credits) and PubH 7406 Biostatistical Inference II (3 credits). Students in this PhD program also regularly attend a research seminar series through which they learn about a variety of public health research methods.

Environmental Health Sciences

PubH 6320 Fundamentals of Epidemiology (3 credit) or PubH 8341 Advanced Epidemiological Methods (3 credits). Students also take PubH 8120 Occupational Health & Safety Research Seminar through which they learn about a variety of public health research methods.

Epidemiology

PubH 8341 Advanced Epidemiological Methods (3 credits) and many other advanced epidemiological courses (see Epidemiology PhD curriculum). Students in this PhD program also regularly attend a research seminar series through which they learn about a variety of public health research methods.

Health Services Research Policy and Administration

PubH 8341 Advanced Epidemiological Methods (3 credits). Students in this PhD program also regularly attend a research seminar series through which they learn about a variety of public health research methods.

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

The policies and procedures related to the production and assessment of the final research project are established by the graduate school: <u>https://policy.umn.edu/education/doctoralperformance</u> and <u>https://policy.umn.edu/education/doctoralcompletion</u>. Students must pass a preliminary written exam and a preliminary oral exam in order to proceed to conducting dissertation research. Students write a dissertation and take a final oral exam/thesis defense. The examination committee for the preliminary written and oral exam as well as the final thesis and oral exam must include at least three graduate faculty members from the program and one graduate faculty member from another program. The examination committee provides comments on the preliminary written exam and drafts of the thesis that students must address. The committee also assesses students' research skills and knowledge of the study through the oral exams. For each written product and oral exam, committee members discuss student performance and vote to pass, pass with reservations (which requires students to specifically address committee reservations), or fail.

Procedures specific to each graduate program are described in student guidebooks.
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.

https://policy.umn.edu/education/doctoralperformance and https://policy.umn.edu/education/doctoralcompletion

Policies and procedures can also be found in each program's student guidebook:

- Biostatistics: <u>https://publichealth.ahc.umn.edu/guidebooks/guidebooks/Biostatistics_MS_MPH_PhD.pdf</u>
- Environmental Health Sciences: <u>https://publichealth.ahc.umn.edu/guidebooks/guidebooks/Environmental_Health_Sciences_PhD.pdf</u>
- Epidemiology: <u>https://publichealth.ahc.umn.edu/guidebooks/guidebooks/Epidemiology_PhD.pdf</u>
- Health Services Research, Policy & Administration: https://publichealth.ahc.umn.edu/guidebooks/guidebooks/Health_Services_Research_Policy_and _Administration_MS_and_PhD.pdf

Also see the student guidebooks in the Electronic Resource File, Criterion D folder, within the D18.6 subfolder.

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.

Samples of PhD student final research projects can be found in the Electronic Resource File within the Criterion D folder. Examples are found in the D18.7 subfolder, within each specific concentration folder.

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.

All PhD students are required to take PubH 6250 Foundations in Public Health (2 credits), which addresses and assesses the foundational public health knowledge domains.

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.

Find syllabi and supporting documentation for the above listed courses in the Electronic Resource File, Criterion D folder, within the D18.9 subfolder.

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

Strengths

- SPH offers rigorous PhD degrees.
- Students receive a foundation in public health through their coursework. Specifically, PhD students are required to take PubH 6250 Foundations in Public Health, which addresses and assesses the foundational public health learning objectives. This high-quality course, rigorously and thoughtfully developed, receives excellent student evaluations.
- PhD students take courses in advanced methodologies or learn the advanced methodologies as they conduct their dissertation research.
- The graduate school administers the PhD degree. In each program, a faculty member serves as the director of graduate studies, provides overall guidance to PhD students, and stays up-to-date with graduate school policies and procedures.

• The graduate school provides a wide variety of resources for PhD students.

Weaknesses

• None.

D19. All Remaining Degrees

Students enrolled in any of the SPH's degree programs that are not addressed in Criteria D2, D3, D9, D17 or D18 complete coursework that provides instruction in the foundational public health knowledge at a level of complexity appropriate to the level of the student's degree program.

The instruction and assessment of students' foundational public health knowledge are equivalent in depth to the instruction and assessment that would typically be associated with a three-semester-credit class, regardless of the number of credits awarded for the experience or the mode of delivery.

The school identifies at least one required assessment activity for each of the foundational public health learning objectives.

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.

We have two MHA programs, one full time and the other delivered in an executive format. The following two tables document the foundational public health learning objectives.

Also find the D19-1 template in the Electronic Resource File, Criterion D19 folder, within the D19.1 subfolder.

Template D19-1: Full time

Content Coverage for Master of Healthcare Administration (Full Time) Degree					
Content	Course number(s) and name(s)	Specific assessment opportunity			
1. Explain public health	PubH 6525: Introduction to	PubH 6525: Knowledge Check #1 - Relate the roles of healthcare and public health			
history, philosophy and values.	Population Health	in contributing to the health of a defined population			
	PubH 6571: Healthcare	PubH 6571: Reading discussion week #1 - students critically discuss historical			
	Quality, Safety, and trends in healthcare quality, patient safety, and quality improvement				
	Performance Improvement	assigned weekly readings.			
2. Identify the core functions	PubH 6525: Introduction to	PubH 6525: Knowledge Check - Describe and compare 4 of 10 essential services of			
of public health and the 10	Population Health	public health; Knowledge Check 2 - describe the evolution of population health and			
Essential Services.*		differentiate it from public health.			

Content Coverage for Master of Healthcare Administration (Full Time) Degree					
Content	Course number(s) and name(s)	Specific assessment opportunity			
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health.	PubH 6525: Introduction to Population Health PubH 6555: Topics in Health Economics	PubH 6525: Step 4 - Incorporating data to help make your argument; what data would you use to evaluate your population health strategy? Scope of problem, quality of intervention, outcome measures. Knowledge Check #7 - discuss values of measurement, data collection, and analysis for population health.			
	PubH 6541: Statistics for Health Management Decision-Making	PubH 6555: In-class article presentations and homework assignments 1-3 require students to use literature and quantitative and qualitative methods to justify answers. Students will interpret quantitative evidence to evaluate support for economic theories affiliated with population health (e.g., health behaviors, healthcare consumption, health outcomes).			
		PubH 6541: Knowledge assessments to test individual mastery of statistical and managerial epidemiology concepts covered in lectures and readings.			
4. List major causes and trends of morbidity and mortality in the US or other	PubH 6525: Introduction to Population Health	PubH 6525: Step 3 - Determining principle of change- primary mode/theory that will modify behaviors of populations to achieve desired outcome. Knowledge Check 2 - describe the major factors influencing healthcare today from a population health			
community relevant to the school or program.	PubH 6555: Topics in Health Economics	perspective. PubH 6555: Students complete homework questions in assignment #1 that test their understanding for how health behaviors (smoking and obesity) affect mortality and			
	PubH 6541: Statistics for Health Management Decision-Making	morbidity. Students list major causes of morbidity and mortality in the US during weekly discussion presentations and final projects.			
	PubH 6571: Healthcare Quality, Safety, and Performance Improvement	PubH 6541: Students explore the leading causes of morbidity and mortality in assignment 1 and compare and contrast how survey data collected by an organization does and does not address these leading causes.			
		PubH 6571: Week 3 Reading Discussion. Students discuss the leading causes of morbidity of mortality and describe how social determinants of health may contribute to inequitable burden of disease and death across populations.			
5. Discuss the science of primary, secondary and tertiary prevention in	PubH 6555: Topics in Health Economics;	PubH 6555: Students are assessed on their knowledge of prevention during Homework 1. Some students may focus on this during weekly discussion presentations and final projects.			

Content Coverage for Master of Healthcare Administration (Full Time) Degree						
Content	Course number(s) and name(s)	Specific assessment opportunity				
population health, including health promotion, screening, etc.	PubH 6525: Introduction to Population Health	PubH 6525: Students are assessed using set of knowledge check questions in Week 1. Complete the following sentence: X is an example of Tertiary Care, Y is an example of Secondary Prevention, Z is an example of Primary Prevention. (X - Educating children on nutrition habits in schools. Y - Conducting community screening clinics to detect breast cancer. Z - Creating a support group for diabetes management.)				
6. Explain the critical importance of evidence in advancing public health	PubH 6525: Introduction to Population Health	PubH 6525: Knowledge Check 9 - Critique pros and cons of evidence based medicine impact on population health.				
knowledge.	PubH 6555: Topics in Health Economics	PubH 6555: Students are assessed on the importance of evidence in each homework assignment (1-3), weekly discussion presentations and final project;				
	PubH 6571: Quality, Patient Safety, and Performance Improvement	PubH 6571: Students critically evaluate two studies during in class discussion (observational and RCT) and discuss strengths and limitations of both to understand how different study designs contribute to scientific evidence for health interventions. Students additionally are introduced to levels of evidence and are assessed on their knowledge during the midterm/final.				
7. Explain effects of environmental factors on a population's health.	PubH 6555: Topics in Health Economics	PubH 6555: Incorporate (Spring 2022) in context of increasing risk of climate change (wildfires) on health care utilization (hospitals and skilled nursing facilities) and health outcomes. Assessed via homework;				
	Systems	PubH 6556: Students given homework assignment 1 related to assessing clinic performance with respect to optimal asthma control and required to explore patient- and provider-specific factors that may lead to poor asthma control, including smoking, household exposures, allergens, etc.				
8. Explain biological and genetic factors that affect a population's health.	PubH 6525: Introduction to Population Health	 PubH 6525: Step 3 - Determining principle of change- primary mode/theory that will modify behaviors of populations to achieve desired outcome. Students are asked to read McGovern's paper titled, The Relative Contribution of Multiple Determinants to Health, and answer several knowledge check questions in Week 4. These include: A) What percentage do genetics and biological factors contribute to overall variation of health? B) Provide an example(s) that uses genetic or biological information to determine disease risk in the population. 				

Content Coverage for Master of Healthcare Administration (Full Time) Degree						
Content	Course number(s) and name(s)	Specific assessment opportunity				
9. Explain behavioral and	PubH 6555: Topics in	PubH 6555: These competencies will be assessed during in-class discussion				
psychological factors that	Health Economics	presentations, homework assignments (1 and 2), and final projects.				
affect a population's health.						
	PubH 6571: Healthcare	PubH 6571: Assessed through small group discussions and reading responses as				
	Quality, Safety, and	students critically evaluate the impact of biological, behavioral and psychological				
	Performance Improvement	factors on health outcomes. Students are additionally evaluated on their ability to critically assess quality measures that would capture differences in biological,				
		behavioral and psychological factors and their influence on health outcomes during				
		small group in-class discussions and the mid-term and final through applied example questions.				
10 Explain the social	PubH 6525: Introduction to	PubH 6525: Step 1 - Identify a population health problem that will be the basis for				
political and economic	Population Health	your population health strategy: Step 2- What is your population of interest - why				
determinants of health and		evidence, and define the challenge: Knowledge Check 3 - characterize the social				
how they contribute to	PubH 6555: Topics in	determinants of health and their relationship to population health outcomes:				
population health and health	Health Economics	h i i i i i i i i i i i i i i i i i i i				
inequities.		PubH 6555: This knowledge domain will be assessed during in-class discussion,				
	PubH 6556: Health and	presentations, homework assignments, and final projects.				
	Health Systems					
		PubH 6556: Assessed using midterm 1 and team project in context of the Quadruple				
		Aim and performance of the US healthcare system with respect to costs, experience				
		of care, population health outcomes, and provider well-being.				
11. Explain how globalization		Pubh 6555: This domain is assessed during Homework 1.				
disease.	Health Economics					

Content Coverage for Master of Healthcare Administration (Full Time) Degree					
Content Course number(s) and name(s)		Specific assessment opportunity			
12. Explain an ecological perspective on the	PubH 6526: Professional Development	PubH 6526: Approximately 4 hour mandatory hybrid course of AHC health professional schools focused on interprofessional education. Course was built into			
health, animal health and ecosystem health (eg, One	PubH 6525: Population Health	(https://healthsciedu.umn.edu/1health-setting-new-standard-interprofessional- education/phase-i-orientation/better-together)			
Health).		PubH 6525: Knowledge Check 2 - What is OneHealth? In what ways does human- animal-environment interaction contribute to potential disease spread and high risk for population health?			

Template D19-1: Executive

Content Coverage for Master of Healthcare Administration (Executive) Degree							
Content	Course number(s) and name(s)	Specific assessment opportunity					
1. Explain public health history,	PubH 7525: Introduction to Population	PubH 7525: Knowledge Check #1 - Differentiate population					
philosophy and values.	Health	health from public health. Define population health. Identify					
		core services of public health, define types of prevention					
		and identify assumptions about health care.					
2. Identify the core functions of public	PubH 7525: Introduction to Population	PubH 7525: Knowledge Check #1 - Describe and compare					
health and the 10 Essential Services.*	Health	4 of 10 essential services of public health					
3. Explain the role of quantitative and	PubH 7525: Introduction to Population	PubH 7525: Step 4 - Incorporating data to help make your					
qualitative methods and sciences in	Health	argument; what data would you use to evaluate your					
describing and assessing a population's		population health strategy? Scope of problem, quality of					
health.	PubH 7541: Statistics for Health	intervention, outcome measures. Knowledge Check #4 -					
	Management Decision-Making	discuss values of measurement, data collection, and					
		analysis for population health.					
	PubH 7555: Topics in Health Economics						
		PubH 7541: Assignments #1-#5					
		PubH 7555: Competencies assessed via reading					

		comprehension quizzes, homework assignments, and final
		project presentations.
4. List major causes and trends of	PubH 7525: Introduction to Population	PubH 7525: Step 3 - Determining principle of change-
morbidity and mortality in the US or other	Health	primary mode/theory that will modify behaviors of
community relevant to the school or		populations to achieve desired outcome. Knowledge Check
program.	PubH 7541: Statistics for Health	3 - describe the major factors influencing healthcare today
	Management Decision-Making	from a population health perspective. Identify five main
		determinants of health according to the CDC. Classify
	PubH 7542: Quality Improvement and Patient Care	findings of Whitehall Studies;
		PubH 7541: Students explore the leading causes of
	PubH 7555: Topics in Health Economics	morbidity and mortality in assignment 1 and compare and
		contrast how survey data collected by an organization does
		and does not address these leading causes.
		PubH 7542: Understand patient, system and population
		impacts of current quality and safety challenges faced by
		health care - assessed by weekly discussion posts.
		PubH 7555: Competencies assessed via reading
		comprehension quizzes, homework assignments, and final
		project presentations.
5. Discuss the science of primary,	PubH 7555: Topics in Health Economics	PubH 7555: Incorporated in content on wellness and
secondary and tertiary prevention in		disease management programs.
population health, including health		
promotion, screening, etc.		
6. Explain the critical importance of	PubH 7525: Introduction to Population	PubH 7525: Knowledge Check 4 - Identify pros and cons of
evidence in advancing public health	Health	evidence based medicine impact on population health
knowledge.		
	PubH 7555: Topics in Health Economics	PubH 7555: Students are assessed on reading
		project presentations.
7. Explain effects of environmental	PubH 7555: Topics in Health Economics	PubH 7555: Incorporate (Spring 2022) in context of
factors on a population's health.		increasing risk of climate change (wildfires) on health care

	PubH 7556: Health and Health Systems	utilization (hospitals and skilled nursing facilities) and health outcomes. Assessed via homework.
		PubH 7556: Spring 2022 assignment #1 focuses on
		optimal asthma control with students investigating root
		causes of asthma exacerbation and potential mitigation strategies.
8. Explain biological and genetic factors	PubH 7525: Introduction to Population	PubH 7525: Step 3 - Determining principle of change-
that affect a population's health.	Health	primary mode/theory that will modify behaviors of
		populations to achieve desired outcome; Knowledge Check
		3 - Label key theories and frameworks underlying social
		determinants of health and population health.
9. Explain behavioral and psychological	PubH 7555: Topics in Health Economics	PubH 7555: These competencies will be assessed during
factors that affect a population's health.		in-class discussion presentations, homework assignments
		(1 and 2), and final projects.
10. Explain the social, political and	PubH 7525: Introduction to Population	PubH 7525: Step 1 - Identify a population health problem
economic determinants of health and	Health	that will be the basis for your population health strategy;
how they contribute to population health		Step 2- What is your population of interest - why, evidence,
and health inequities.	PubH 7555: Topics in Health Economics	and define the challenge; Knowledge Check 3 -
		characterize the social determinants of health and their
		relationship to population health outcomes;
		PubH 7555: This knowledge domain will be assessed
		during in-class discussion, presentations, homework
		assignments, and final projects.
11. Explain how globalization affects	PubH 7555: Topics in Health Economics	PubH 7555: This domain early in the course as we cover
global burdens of disease		factors leading to the rise in chronic, non-communicable
		diseases in lower- and middle-income countries and how
		that may impact health care systems.
12. Explain an ecological perspective on	PubH 7525: Population Health	PubH 7525: Knowledge Check 1- What is OneHealth? In
the connections among human health,		what ways does human-animal-environment interaction
animal health and ecosystem health (eg,		contribute to potential disease spread and high risk for
One Health)		population 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.

All MHA and executive MHA students are required to take the following courses which address and assesses the foundational public health learning objectives.

МНА	Executive MHA
PubH 6525: Introduction to Population Health	PubH 7525: Introduction to Population Health
PubH 6526: Professional Development	PubH 7541: Statistics for Health Management Decision-Making
PubH 6541: Statistics for Health Management Decision-Making	PubH 7542: Quality Improvement and Patient Care
PubH 6555: Topics in Health Economics	PubH 7555: Topics in Health Economics
PubH 6556: Health and Health Systems	PubH 7564: Private Purchasers of Health Care
PubH 6571: Healthcare Quality, Safety, and Performance Improvement	

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.

Please find all syllabi and supporting documents in the Electronic Resource File, Criterion D folder, within the D19.3 subfolder.

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

Strengths

• The MHA program is well-established and is ranked the #2 program in the country.

Weaknesses

• None.

D20. Distance Education

The university provides needed support for the school, including administrative, communication, information technology and student services.

There is an ongoing effort to evaluate the academic effectiveness of the format, to assess learning methods and to systematically use this information to stimulate school improvements. Evaluation of student outcomes and of the learning model are especially important in institutions that offer distance learning but do not offer a comparable in-residence school.

1) Identify all public health distance education degree programs and/or concentrations that offer a curriculum or course of study that can be obtained via distance education. Template Intro-1 may be referenced for this purpose.

The School of Public Health has five programs that meet the criteria of distance education.

- MPH Maternal and Child Health
- MPH Public Health Administration and Policy
- MPH Public Health Practice
- Master of Healthcare Administration
- MS Clinical Research

2) Describe the public health distance education programs, including

a. an explanation of the model or methods used,

The UMN School of Public Health offers two entirely online degree programs (both through the division of epidemiology and community health): the maternal and child health (MCH) MPH, and the clinical research (CR) MS. All distance students are invited to attend and complete academic courses through our oncampus, week-long Public Health Institute (PHI) each May; additionally, students who live in Minnesota can take in-person courses (if available) to meet program or elective requirements. The online MCH degree follows the same curriculum, required credits, and other expectations as the in-person program. We have offered this option to advanced standing students for more than a decade. More recently, we have extended MCH online learning to standard track students as well, because the number of online courses is sufficient to meet the needs of both student groups. The CR program is designed specifically for physicians and other healthcare providers, and the fully online format allows these professionals to balance the program requirements with busy clinical schedules.

The Division of Health Policy and Management houses the distance education programs for the MPH in public health administration and policy (PHAP) and a master of healthcare administration (MHA). Although one arm of the PHAP program is entirely online, students can come to campus for the PHI if they choose. The program relies on existing online course content prepared as part of the SPH's regular curriculum. The PHAP curriculum, required credits, and other expectations do not differ between the online and in-person tracks. The MHA executive track is delivered online and asynchronously for enrolled students over the course of 25 months. The MHA executive track aims to serve working professionals, whereas the MHA in-person track is designed for bachelor's prepared individuals with zero to four years of work experience. Core curriculum and competencies do not differ between the in-person and executive tracks. Both tracks of the MHA degree are accredited by CAHME as one program.

Students in the MPH public health practice (PHP) program have options for both in-person and online (mainly asynchronous) core and elective courses. They complete the same curriculum in both cases.

Online courses at SPH are developed by faculty and instructors in close partnership with the education and academic technology team (E-Learning Services). Courses are developed with focus on effective

educational practices, with most courses relying primarily on asynchronous lecture, asynchronous discussion boards, group projects with interactions managed by the students, and synchronous office hours. Regular interaction between students and engagement with the instructor is expected.

b. the school's rationale for offering these programs,

SPH's long, successful history with distance programs dates back to our first distance course in 1999. Today, our online degree programs allow students from across the country and world to benefit from a UMN SPH education while remaining in their communities. These programs also allow working professionals to pursue graduate professional education. The MCH and CR programs in particular attract physicians, nurses, and other clinicians who typically find completing in-person courses challenging due to their demanding clinical schedules. Moreover, traditionally in-person students also take online courses, demonstrating a demand for a flexible curriculum that integrates the benefits of online programs alongside in-person learning.

c. the manner in which it provides necessary administrative, information technology and student support services,

- Applications: All five of our distance education programs use SOPHAS, the same national application system SOPHAS used for in-person programs. The only variance applies to the MHA program, for which all in-person applicants must complete an interview, while only some students applying to the executive (distance) track will be interviewed.
- Application Review and Admission Process: For all programs identified in this section, we use the same application review for online and in-person applicants. For the PHP distance program, a team of faculty and subject matter experts holistically reviews applications.
- Faculty & Staff: Faculty and staff are the same for online and in-person programs, and all students receive the same student services support.
- Technology Support: UMN offers centrally administered tools for all schools within the University system. These include: Zoom video, Canvas Learning Management System (LMS) plus various integrations of learning technology tools into Canvas, including Kaltura (recorded video), online library reserves, etc. Faculty and students have 24/7 support via the University's 1-Help, and can access individual support through our Office of E-Learning Services.
- SPH Office of E-Learning Services: The Office of E-Learning Services provides full instructional design and development support for all online courses. The team consists of instructional designers and staff who specialize in learning technologies and instructional systems, and they offer consulting for instructional strategy and learning management system usage for any course. E-learning also offers multimedia lecture development in addition to instructional design services. During the pandemic, they have scaled up services for supporting strategy for synchronous and traditionally inperson courses, as well as some student services and recruitment support.
- Student Services Support: Online and in-person programs in the division of epidemiology and community health (MCH & CR) receive support from the same student services team. The team consists of a student services director, a staff level senior academic advisor, a staff level academic advisor, two academic support coordinators who assist with course scheduling and instructor support, and two 25% graduate assistants. This team supports four MPH programs (including the online MCH program), one PhD program, one MS program, two certificate programs, four graduate minors, and two graduate certificate programs. In the Division of Health Policy & Management, the PHAP program employs two student services coordinators at baseline, but if online student enrollment increases beyond a predetermined point, another staff member is hired to help handle the extra workload. All students in the MHA program have access to the same student services support resources at the program, school, and university level. Public health practice students have access to the program coordinator and faculty director, plus affiliate faculty across the University.

- Applied Practice Experience (APEx) Support: Along with faculty providing their students with suggestions for APEx sites, the distance MCH, PHAP, and PHP programs all receive support from a dedicated staff member who coordinates APEx, assists students and faculty, and tracks necessary data.
- Integrated Learning Experience (ILE) Support: The online MPH and MHA programs have extensive experience in helping students complete their ILE at a distance. All students, whether attending in person or online, have access to the same resources, faculty, coordinators, and advisors.
- Writing Center: Writing well is a crucial skill practiced in professional and graduate school. Many of our core classes require extensive iterative writing assignments. Therefore, we provide unlimited access to writing support through the UMN's Center for Writing <u>http://writing.umn.edu/</u>. BIPOC students also have access to writing support through the Community of Scholars Program <u>https://grad.umn.edu/diversity/community-scholars-program</u>.
- Libraries: The University libraries provide <u>online course reserve services</u> in coordination with the University bookstore to ensure that online students can access digital materials through the library's system. The SPH E-Learning Services team works with the Online Reserves team to ensure that all course materials are prepared prior to the semester for students in online courses and that faculty are aware of how to make changes. We provide further library information in section C5: Information and Technology Resources.

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

The Educational Policy Committee reviews all new and substantially reviewed courses and programs. Academic expectations for online and in-person attendance do not differ. Instructors are expected to provide the same level of feedback and attention to students regardless of whether they teach online or in person. The E-Learning Services team consists of educational experts who help faculty design effective teaching and learning strategies for their online courses.

e. the manner in which it evaluates the educational outcomes, as well as the format and methods.

Evaluation is the same for traditional and distance programs or courses. The Educational Policy Committee reviews all new and substantially reviewed courses and programs. All students must meet the learning objectives of their courses and fulfill the components of their programs.

The E-Learning Services director reviews course evaluations for online courses to identify areas for improvement, especially areas where instructional designers might have an impact on course success.

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.

SPH uses three primary processes to verify students:

- <u>Technology</u>: all courses are delivered via the Canvas Learning Management system, which uses the University of Minnesota's enterprise system to enroll students. Students must use their secure University logins and two-factor authentication (Duo). In cases of potential academic dishonesty, the <u>Office of Community Standards</u> investigates.
- 2. <u>Faculty/Instructor Presence</u>: SPH online courses are not self-study. They rely on engagement between students and between instructors/faculty/TAs and students.

3. <u>Student Services & Program Leadership</u>: Program directors and student services staff work with SPH students in their program areas, interacting with them regularly throughout their time in the program.

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

Strengths

- SPH has a long, successful record of offering online courses. We build on previous successes while continually identifying needs and making improvements.
- Our focus on flexibility allows students in traditional professional and graduate programs to add online courses to their schedules, thereby increasing access for all SPH students.
- Students learning online receive the same student services as our in-person students.
- Because SPH treats online and executive programs similarly to traditional programs, alumni remain engaged, offering a network of support and opportunity for incoming students.
- All SPH students benefit from the same skilled and experienced instructors regardless of whether they study in-person or online. Online courses are taught by tenure and tenure-track faculty, full-time instructors with disciplinary expertise, and affiliate faculty who are deeply connected in the industries in which SPH students hope to work.
- SPH has a strong team of staff and leadership supporting E-learning and distance education.

Weaknesses

• Students attending remotely lack access to the many on-campus opportunities available to inperson students. Therefore, non-cohort-based students can face challenges creating robust networks.

E1. Faculty Alignment with Degrees Offered

Faculty teach and supervise students in areas of knowledge with which they are thoroughly familiar and qualified by the totality of their education and experience.

Faculty education and experience is appropriate for the degree level (bachelor's, master's, doctoral) and the nature of the degree (research, professional practice, etc.) with which they are associated.

1) Provide a table showing the school'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.

The following table documents that the school has 112 primary instructional faculty who teach and supervise students in areas of knowledge with which they are thoroughly familiar and qualified. They all hold a 1.0 FTE in the School of Public Health. Faculty CVs can be found in the Electronic Resource File, Criterion E folder, within the E1.3 subfolder and on the SPH website https://directory.sph.umn.edu.

Primary Instructional Faculty Alignment with Degrees Offered								
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1		
Abraham, Jean	Professor	Professor, Interim Division Head	PhD	Carnegie Mellon University	Public Policy Analysis	Health Services Policy, Research & Administration		
Arnold, Susan	Associate Professor	Associate Professor	PhD	University of Minnesota	Environmental Health	Environmental Health Sciences		
Balbo, Silvia	Associate Professor	Associate Professor	PhD	University of Torino	Medical Chemistry Genetic Toxicology	Environmental Health Sciences		
Basu, Saonli	Professor	Professor	PhD MStat	University of Washington Indian Statistical Institute	Statistics Statistics	Biostatistics		
Beebe, Timothy	Professor	Interim Dean	PhD MA	University of Minnesota	Sociology	Health Services Policy, Research & Administration		
Bender, Jeffrey	Professor	Professor	DVM MS	University of Minnesota	Veterinary Medicine	Environmental Health Sciences		

Template E1-1

Primary Instructional Faculty Alignment with Degrees Offered							
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1	
Berg, Bjorn	Assistant Professor	Assistant Professor	PhD	North Carolina State University	Industrial Engineering	Public Health Administration & Policy	
Berman, Jesse	Assistant Professor	Assistant Professor	PhD MS	Johns Hopkins University	Environmental Health	Environmental Health Sciences	
Blewett, Lynn	Professor	Professor	PhD MA	University of Minnesota	Health Services Research/Policy	Health Services Policy, Research & Administration	
Bonilla, Zobeida	Associate Professor	Associate Professor	PhD MPH MA	University of Florida - Gainesville Boston University Colorado State University	Sociocultural Anthropology Maternal & Child Health Cultural Anthropology	Maternal & Child Health	
Brady, Sonya	Associate Professor	Associate Professor	PhD MS	University of Pittsburgh	Clinical Psychology & Biological/Health Psychology Health Psychology	Community Health Promotion	
Brearley, Ann	Assistant Professor	Assistant Professor	PhD MS	University of Minnesota	Analytical Chemistry Biostatistics	Biostatistics	
Butler, Mary	Associate Professor	Associate Professor	PhD MBA	University of Minnesota	Health Services Policy, Research & Administration	Health Services Policy, Research & Administration	
Call, Kathleen	Professor	Professor	PhD	University of Minnesota	Sociology	Health Services Policy, Research & Administration	
Carroll, Caitlin	Assistant Professor	Assistant Professor	PhD	Harvard University	Health Policy and Management	Health Services Policy, Research & Administration	
Carroll, Dana	Assistant Professor	Assistant Professor	PhD MPH	University of Oklahoma	Epidemiology	Environmental Health Sciences	
Chu, Haitao	Professor	Professor	PhD MD MS	Emory University West China University of Medical Sciences Emory University	Biostatistics Preventative Medicine Biostatistics	Biostatistics	
Cross, Dori	Assistant Professor	Assistant Professor	PhD	University of Michigan	Health Services Organization and Policy	Health Services Policy, Research & Administration	
Demerath, Ellen	Professor	Professor	PhD MA	University of Pennsylvania	Anthropology	Maternal & Child Health	

Primary Instructional Faculty Alignment with Degrees Offered							
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1	
Demmer, Ryan	Associate Professor	Associate Professor	PhD MPH	University of Minnesota	Epidemiology	Epidemiology	
Dill, Janette	Associate Professor	Associate Professor	PhD MA MPH	University of North Carolina - Chapel Hill	Sociology Sociology Health Policy & Management	Public Health Administration & Policy	
Dowd, Bryan	Professor	Professor	PhD MS	University of Pennsylvania	Public Policy	Health Services Policy, Research & Administration	
Eaton, Anne	Assistant Professor	Assistant Professor	PhD MS	University of Minnesota	Biostatistics	Biostatistics	
Eberly, Lynn	Professor	Associate Dean	PhD MS	Cornell University	Statistics	Biostatistics	
Enns, Eva	Associate Professor	Associate Professor	PhD MS	Stanford University	Electrical Engineering	Health Services Policy, Research & Administration	
Erickson, Darin	Associate Professor	Associate Professor	PhD MA	University of Missouri	Social Psychology	Epidemiology	
Fiecas, Mark	Assistant Professor	Assistant Professor	PhD	Brown University	Biostatistics	Biostatistics	
French, Simone	Professor	Professor	PhD	University of Minnesota	Psychology	Epidemiology	
Frizzell, Linda	Associate Professor	Associate Professor	PhD	University of North Dakota	Teaching and Learning	Environmental Health Sciences	
Gaugler, Joseph	Professor	Professor	PhD MS	Pennsylvania State University	Human Development	Health Services Policy, Research & Administration	
Golberstein, Ezra	Associate Professor	Associate Professor	PhD	University of Michigan - Ann Arbor	Health Services Organization & Policy	Public Health Administration & Policy	
Gollust, Sarah	Associate Professor	Associate Professor	PhD	University of Michigan - Ann Arbor	Health Services Organization & Policy	Public Health Administration & Policy	
Grande, Stuart	Lecturer	Lecturer	PhD MPA	Indiana University	Health Behavior Public Management & Community Development	Public Health Administration & Policy	

		Primary I	nstructional	Faculty Alignment with Deg	grees Offered	
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Guan, Weihua	Associate Professor	Associate Professor	PhD MS	University of Michigan Texas A&M University	Biostatistics Statistics	Biostatistics
Hardeman, Rachel	Associate Professor	Associate Professor	PhD MPH	University of Minnesota	Health Services Research, Policy & Administration	Public Health Administration & Policy
Harnack, Lisa	Professor	Professor	DrPH MPH	University of California - Berkeley Public Health Nutrition		Public Health Nutrition
Hedberg, Craig	Professor	Professor	PhD MS	University of Minnesota Epidemiology		Environmental Health Sciences
Helgeson, Erika	Assistant Professor	Assistant Professor	PhD	University of North Carolina - Chapel Hill	Biostatistics	Biostatistics
Henning-Smith, Carrie	, Associate Professor Associate Professor Associate Professor MS University of Mini MS MPH Arbor MSW University of Mini MS University of Mini		University of Minnesota University of Minnesota University of Michigan - Ann Arbor University of Michigan - Ann Arbor	Health Services Research, Policy & Administration Health Services Research, Policy & Administration Health Behavior & Health Education Interpersonal Practice & Mental Health	Public Health Administration & Policy	
Hodges, James	Professor	Professor	PhD MA	University of Minnesota	Statistics Public Affairs	Biostatistics
Huckfeldt, Peter	Associate Professor	Associate Professor	PhD	University of California - Davis	Economics	Health Services Policy, Research & Administration
Huling, Jared	Assistant Professor	Assistant Professor	PhD	University of Wisconsin - Madison	Statistics	Biostatistics
Jacobs Jr, David	Professor	Professor	PhD	Johns Hopkins University	Mathematical Statistics	Epidemiology
Jeon, Byeonghwa	Associate Professor	Associate Professor	PhD MS	University of Tokyo	Agricultural and Life Sciences	Environmental Health Sciences

		Primary Ir	nstructional	Faculty Alignment with Deg	grees Offered	
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Jones-Webb, Rhonda	Professor	Professor	DrPH MSPH MA	University of California - Berkeley University of California - Los Angeles University of California - Los Angeles	Behavioral Sciences Behavioral Sciences & Health Education African Studies	Community Health Promotion
Kim, Hyun	Associate Professor	Associate Professor	PHS	University of Massachusetts - Lowell	Work Environment	Environmental Health Sciences
Koopmeiners, Joseph	Professor	Professor	PhD MS	University of Washington University of Minnesota	Biostatistics Biostatistics	Biostatistics
Kozhimannil, Katy	Professor	Professor	PhD MPA	Harvard UniversityHealth PolicyPrinceton UniversityPublic Affairs		Health Services Policy, Research & Administration
Kulasingam, Shalini	Professor	Professor	PhD MPH	University of Washington University of California - Los Epidemiology		Clinical Research
Kuntz, Karen	Professor	Professor	ScD MS	Harvard University	Biostatistics	Health Services Policy, Research & Administration
Larson, Nicole	Researcher 7	Researcher 7	PhD MPH	University of Minnesota	Nutrition	Public Health Nutrition
Laska, Melissa	Professor	Professor	PhD	University of North Carolina - Chapel Hill	Nutrition	Public Health Nutrition
Le, Chap	Professor	Professor	PhD MA	University of New Mexico California State University - Fresno	Statistics Mathematics	Biostatistics
Le, Laura	Lecturer	Lecturer	PhD MS	University of Minnesota	Educational Psychology, Statistics Education Statistics	Biostatistics
Linde, Jennifer	Associate Professor	Associate Professor	PhD MA	University of Iowa	Clinical Psychology Psychology	Community Health Promotion
Lock, Eric	Associate Professor	Associate Professor	PhD	University of North Carolina	Statistics	Biostatistics

		Primary I	nstructional	Faculty Alignment with Deg	grees Offered	
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Luo, Xianghua	Professor	Professor	PhD MS	Johns Hopkins University Peking University	Biostatistics Urban & Environmental Sciences	Biostatistics
Lutsey, Pamela	Associate Professor	Associate Professor	PhD MPH	University of Minnesota	Epidemiology	Clinical Research
Maclehose, Richard	Associate Professor	Associate Professor	PhD MS	University of North Carolina - Chapel Hill Epidemiology University of Washington		Epidemiology
Maldonado, George	Associate Professor	Associate Professor	PhD MS	University of California - Los Angeles		Environmental Health Sciences
Mason, Susan	Associate Professor	Associate Professor	PhD MPH	University of North Carolina Epidemiology - Chapel Hill Maternal & Child Health		Maternal & Child Health
McAlpine, Donna	Associate Professor	Associate Professor	PhD MA	Rutgers University The University of Western Ontario	Sociology	Health Services Policy, Research & Administration
Munoz-Zanzi, Claudia	Associate Professor	ociate fessor Associate Professor DVM PhD MPVM DVM DVM PhD MPVM Dvis University of California - Davis University of California - Davis University of California -		Veterinary Medicine Epidemiology Preventive Veterinary Medicine	Environmental Health Sciences	
Murray, Thomas	Assistant Professor	Assistant Professor	PhD MS	University of Minnesota	Biostatistics	Biostatistics
Neaton, James	Professor	Professor	PhD MS	University of Minnesota	Biometry	Biostatistics
Nelson, Heather	Professor	Professor	PhD MPH	Harvard University University of Minnesota	Cancer Biology Environmental Health	Epidemiology
Nelson, Toben	Professor	Professor	ScD MS	Harvard University University of Wisconsin - Madison	Public Health Kinesiology	Epidemiology
Neprash, Hannah	Assistant Professor	Assistant Professor	PhD	Harvard University	Health Policy	Health Services Policy, Research & Administration

		Primary Ir	nstructional	Faculty Alignment with Deg	grees Offered	
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Neumark- Sztainer, Dianne	Professor	Professor	PhD MPH	Hebrew University - Hadassah	Behavioral Sciences & Nutrition Health Behavior	Public Health Nutrition
Nguyen, Hong- Ngoc	Associate Professor	Associate Professor	PhD MHS	Johns Hopkins University	Epidemiology	Maternal & Child Health
Nikpay, Sayeh	Associate Professor	Associate Professor	PhD MPH	University of Michigan	Health Economics	Health Services Policy, Research & Administration
Oliver, Jonathan	Assistant Professor	Assistant Professor	PhD	Iowa State University	Entomology	Environmental Health Sciences
Osterholm, Michael	Regents Professor	Regents Professor	PhD MS MPH	University of Minnesota Environmental Health Environmental Health Epidemiology		Environmental Health Sciences
Osypuk, Theresa	Associate Professor	Associate Professor	ScD MS	Harvard University	Social Epidemiology	Community Health Promotion
Pan, Wei	Professor	Professor	PhD MS MS	University of Wisconsin - Madison	Statistics Computer Science Statistics	Biostatistics
Pankow, James	Professor	Professor	PhD MPH	University of Minnesota	Epidemiology	Epidemiology
Parsons, Helen	Associate Professor	Associate Professor	PhD MPH	University of Minnesota	Health Services Research, Policy & Administration	Public Health Administration & Policy
Pereira, Mark	Professor	Professor	PhD MPH MS	University of Pittsburgh University of Pittsburgh University of Massachusetts	Epidemiology Epidemiology Exercise Science	Public Health Nutrition
Petersen, Ashley	Assistant Professor	Assistant Professor	PhD	University of Washington	Biostatistics	Biostatistics
Peterson, Lisa	Professor	Professor	PhD	University of California - San Francisco	Pharmaceutics	Environmental Health Sciences
Ramirez, Marizen	Professor	Professor	PhD	University of California	Epidemiology	Environmental Health Sciences

		Primary I	nstructional	Faculty Alignment with Deg	grees Offered	
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Raynor, Peter	Professor	Professor	PhD	University of North Carolina - Chapel Hill	Environmental Sciences and Engineering	Environmental Health Sciences
Reilly, Cavan	Professor	Professor	PhD MS MA	Columbia University Columbia University New School for Social Research	Statistics Statistics Economics	Biostatistics
Rockwood, Todd	Associate Professor	Associate Professor	PhD MA	Washington State University Sociology		Health Services Policy, Research & Administration
Rosser, Brian	Professor	Professor	PhD MPH MA	Flinders University, South Australia University of Minnesota University of Auckland		Epidemiology
Rudser, Kyle	Associate Professor	Associate Professor	PhD MS	University of Washington	Biostatistics	Biostatistics
Safo, Sandra	Assistant Professor	Assistant Professor	PhD MS	University of Georgia University of Akron	Statistics Applied Mathematics	Biostatistics
Schreiner, Pamela	Professor	Professor	PhD MS MS	University of North Carolina - Chapel Hill Iowa State University Iowa State University	Epidemiology Biomedical Engineering Molecular, Cellular, & Developmental Biology	Epidemiology
Searle, Kelly	Assistant Professor	Assistant Professor	PhD ScM	Johns Hopkins University	Epidemiology	Epidemiology
Sherwood, Nancy	Associate Professor	Associate Professor	PhD MA	Kent State University	Clinical Psychology	Public Health Nutrition
Shippee, Nathan	Associate Professor	Associate Professor	PhD MS	Purdue University	Sociology	Health Services Policy, Research & Administration
Shippee, Tetyana	Associate Professor	Associate Professor	PhD JD MS	Purdue University Precarpathian National University - Ukraine Purdue University	Sociology & Gerontology Civil Law Sociology	Public Health Administration & Policy

		Primary I	nstructional	Faculty Alignment with Deg	grees Offered	
Name	Title/ Academic Rank	Tenure Status or Classification^	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Shore, Marta	Lecturer	Lecturer	MS	University of Minnesota	Statistics	Biostatistics
Simcik, Matt	Professor	Professor	PhD MS	Rutgers University	Environmental Science	Environmental Health Sciences
Slaughter-Acey, Jaime	Assistant Professor	Assistant Professor	PhD MPH	University of Illinois - Chicago Tulane University	Maternal & Child Health Epidemiology Maternal & Child Health	Maternal & Child Health
Smith, Margaret	Assistant Professor	Assistant Professor	PhD MPIA	University of North Carolina - Chapel Hill Epidemiology University of California - Public & International Affair San Diego		Epidemiology
Steffen, Lyn	Associate Professor	Associate Professor	PhD MPH	University of Texas Health Science Center - Houston University of Minnesota		Public Health Nutrition
Stepanov, Irina	Professor	Professor	PhD	Moldova State University	Chemistry	Environmental Health Sciences
Tang, Weihong	Associate Professor	Associate Professor	MD PhD MS	West China University of Medical Sciences University of Minnesota Peking Union Medical College	Preventive Medicine Epidemiology Epidemiology	Epidemiology
Tarr, Gillian	Assistant Professor	Assistant Professor	PhD MHS	University of Washington Johns Hopkins University	Epidemiology Epidemiology	Environmental Health Sciences
Toomey, Traci	Professor	Professor	PhD MPH	University of Minnesota	Epidemiology	Community Health Promotion
Ulrich, Angela	Assistant Professor	Assistant Professor	PhD MPH	University of Washington	Epidemiology	Environmental Health Sciences
Virnig, Beth	Professor	Professor	PhD MPH	University of Minnesota	Epidemiology & Biostatistics Epidemiology	Health Services Policy, Research & Administration
Vock, David	Associate Professor	Associate Professor	PhD MStat	North Carolina State University	Statistics	Biostatistics

	Primary Instructional Faculty Alignment with Degrees Offered											
Name	Title/ Academic Rank	c Tenure Status or D Classification [^] E		Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1						
Wattenberg, Elizabeth	Professor	Associate Dean	PhD	Massachusetts Institute of Technology	Toxicology	Environmental Health Sciences						
White, Kathleen	Associate Professor	Associate Professor	EdD MBA	University of St. ThomasOrganization DevelopmentUniversity of MinnesotaManagement		Health Services Policy, Research & Administration						
Widome, Rachel	Associate Professor	Associate Professor	PhD MHS	University of Minnesota Johns Hopkins University	ity of Minnesota Epidemiology lopkins University International Health							
Wolfson, Julian	Associate Professor	Associate Professor	PhD	University of Washington	Biostatistics	Biostatistics						
Wu, Baolin	Professor	Professor	PhD	Yale University	Biostatistics	Biostatistics						
Yang, Tianzhong	Assistant Professor	Assistant Professor	PhD MPH	University of Texas Health Science Center at Houston Boston University	Biostatistics Biostatistics & Epidemiology	Biostatistics						
Zhang, Lin	Assistant Professor	Assistant Professor	PhD MS	Texas A&M University	Statistics Biology	Biostatistics						

2) Provide summary data on the qualifications of any other faculty with significant involvement in the school's public health instruction in the format of Template E1-2. Schools define "significant" in their own contexts but, at a minimum, include any individuals who regularly provide instruction or supervision for required courses and other experiences listed in the criterion on Curriculum. Reporting on individuals who supervise individual students' practice experience (preceptors, etc.) is not required. The identification of instructional areas must correspond to the data presented in Template C2-1.

SPH defines Non-PIF as:

- Less than 1.0 FTE
- Part-time or intermittent (hired to teach on a non-regular basis)
- Appointment outside of SPH faculty
- Those with no teaching responsibilities

Template E1-2

	Non-Primary Instructional Faculty Regularly Involved in Instruction											
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1					
Adawe, Amira	Lecturer	Intermittent	0.05	MPH	University of Minnesota	Maternal & Child Health	Public Health Practice					
Agunwamba, Amenah	Lecturer	Intermittent	0.05	ScD MPH	Harvard University University of Minnesota	Public Health, Society, Human Development & Health Epidemiology	Public Health Practice					
Alexander, Bruce	Adjunct Professor	Adjunct Professor	0.01	PhD MS	University of Washington Colorado State University	Epidemiology Environmental Health	Environmental Health Sciences					
Arlinghaus, Katherine	Assistant Professor	Assistant Professor	1	PhD MS	University of Houston Case Western Reserve University	Kinesiology Public Health Nutrition	Public Health Nutrition					
Axtell, Sara	Lecturer	Intermittent	0.05	PhD	University of Minnesota	Family Social Science	Community Health Promotion					

		Non-Primary Inst	ructional Faculty F	Regularly Invo	olved in Instruction		
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Barry, Anne	Senior Lecturer	Intermittent	0.05	JD MPH	Mitchell Hamline School of Law University of Minnesota	Law Public Health Administration & Policy	Public Health Administration & Policy
Begun, James	Professor	Professor	0.8	PhD MA	University of North Carolina	Sociology	Health Services Research, Policy & Administration
Berge, Jerica	Professor	Intermittent	0.05	PhD MPH MS	University of Minnesota University of Minnesota Brigham Young University	Family Social Science/Marriage & Family Therapy Epidemiology Marriage & Family Therapy	Public Health Practice
Bretl, Lynn	Adjunct Instructor	Intermittent	0.05	MPP	University of Minnesota	Social Policy	Maternal & Child Health
Burke, Emily	Lecturer	Intermittent	0.05	MPH	Drexel University	Community Health & Prevention	Public Health Administration & Policy
Calderon, Katherine	Lecturer	Intermittent	0.05	MHA	University of Minnesota	Healthcare Administration	Health Services Research, Policy & Administration
Carlson, Kathryn	Teaching Specialist	Intermittent	0.05	MS	University of Akron	Geography	Public Health Practice
Carroll, Cody	Lecturer	Intermittent	0.05	MPH	University of Minnesota	Public Health Administration & Policy	Public Health Administration & Policy
Christianson, Jon	Professor	Professor	0.5	PhD MS	University of Wisconsin - Madison	Economics	Public Health Administration & Policy
Cusick, Sarah	Assistant Professor	Assistant Professor	1	PhD	Johns Hopkins University	Human Nutrition & International Health	Epidemiology

		Non-Primary Inst	ructional Faculty I	Regularly Invo	olved in Instruction		
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Duarte, Horacio	Assistant Professor	Assistant Professor	1	MD MS	University of Texas Medical School - Houston University of Washington	Pediatrics Health Outcomes, Policy & Economics	Epidemiology
Eiler, Timothy	Senior Lecturer	Intermittent	0.05	МВА	University of Houston	Business	Public Health Administration & Policy
Finnegan, John	Professor	Dean Emeritus (retired 1/31/22)	1	PhD MA	University of Minnesota	Mass Communication	Epidemiology
Folsom, Aaron	Professor	Professor	0.7	MD MPH	Ohio State University University of Michigan	Medicine Epidemiology	Epidemiology
Garavalia, Lesley	Lecturer	Intermittent	0.05	MPP	University of Minnesota	Social Policy & Advanced Policy Analysis Methods	Health Services Research, Policy & Administration
Hellerstedt, Wendy	Associate Professor Emeritus	Intermittent	0.05	PhD MPH	University of Minnesota	Epidemiology	Maternal & Child Health
Jeffery, Robert	Professor	Professor Emeritus	0.2	PhD	Stanford University	Psychology	Community Health Promotion
Johnson, Abigail	Assistant Professor	Assistant Professor	1	PhD	University of Minnesota	Nutrition	Public Health Nutrition
Keene, Sarah	Senior Teaching Specialist	Teaching Specialist	0.8	MSE	University of Pennsylvania	Psychological Services	Undergraduate
Kirkhorn, Steven	Adjunct Associate Professor	Adjunct Associate Professor	0.1	MD	University of Minnesota	Occupational & Environmental Medicine	Environmental Health Sciences
Krueger, Richard	Lecturer	Intermittent	0.05	PhD MA	University of Minnesota	Educational Public Administration	Public Health Practice

		Non-Primary Inst	ructional Faculty F	Regularly Invo	olved in Instruction		
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Lakshminarayan, Kamakshi	Associate Professor	Associate Professor	0.9	PhD MS MBBS	University of California - Irvine University of Minnesota Jawaharlal Institute of Postgraduate Medical Education & Research (India)	Cognitive Science Health Services Research & Policy Medical Education & Research	Clinical Research
Lamprecht, Lara	Lecturer	Intermittent	0.05	DrPH MPH	University of Illinois - Chicago University of Minnesota	Doctor of Public Health Community Health Education	Public Health Administration & Policy
Lando, Harry	Professor	Professor	0.5	PhD	Stanford University	Psychology	Community Health Promotion
Lee, Soo-Young	Lecturer	Intermittent	0.05	MFM	University of Minnesota	Financial Mathematics	Health Services Research, Policy & Administration
Leider, Jonathon	Senior Lecturer	Senior Lecturer	0.75	PhD	Johns Hopkins University	Health Policy & Management	Public Health Administration & Policy
Lucachick, Laurie	Senior Teaching Specialist	Senior Teaching Specialist	1	MPH	University of Minnesota	Public Health	Undergraduate
Luepker, Russell	Professor	Professor Emeritus	0.25	MD MS	University of Rochester Harvard University	Medicine Epidemiology	Clinical Research
Matson, Emily	Senior Teaching Specialist	Teaching Specialist	1	MPH	University of Minnesota	Community Health	Undergraduate
McCarthy, James	Lecturer	Intermittent	0.05	MBA BS	Cranfield University Florida Hospital College of Health Sciences	Business Administration & Management Nursing	Public Health Administration & Policy

		Non-Primary Inst	ructional Faculty F	Regularly Invo	olved in Instruction		
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
McDonald, Lillian	Lecturer	Intermittent	0.05	MA	University of Minnesota	Training & Organizational Development	Public Health Practice
Meyer, Alexis	Lecturer	Intermittent	0.05	MHA	University of Minnesota	Healthcare Administration	Health Services Research, Policy & Administration
Mitchell, Ashley	Teaching Specialist	Teaching Specialist	1	MPH	University of Minnesota	Maternal & Child Health	Undergraduate
Moscovice, Ira	Professor	Professor	0.5	PhD MS	Yale University Columbia University	Administrative Sciences Operations Research	Health Services Research, Policy & Administration
Moulton, Anthony	Lecturer	Intermittent	0.05	PhD	University of Chicago	Political Science	Public Health Administration & Policy
Mugglin, Andrew	Research Associate Professor	Research Associate Professor	0.2	PhD MS	University of Minnesota Rensselaer Polytechnic Institute	Biostatistics Mathematics	Biostatistics
Nkimbeng, Manka	Assistant Professor	Assistant Professor	1	PhD MPH	Johns Hopkins University Boston University	Nursing Health Policy & Management, International Health	Health Services Research, Policy & Administration
Patterson, Gilbert	Lecturer	Intermittent	0.05	DVM	University of Pennsylvania	Veterinary Medicine	Public Health Practice
Pergament, Shannon	Lecturer	Intermittent	0.05	MPH MSW	University of Minnesota	Community Health Education Health/Mental Health	Health Services Research, Policy & Administration
Petersen-Kroeber, Cheryl	Lecturer	Intermittent	0.05	ВА	University of Minnesota - Duluth	Community Health	Public Health Practice
Poquette, Lindsey	Teaching Specialist	Teaching Specialist	0.85	MPH	Oregon State University - Corvallis	Health Promotion & Health Behavior	Undergraduate

Non-Primary Instructional Faculty Regularly Involved in Instruction								
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1	
Porta, Carolyn	Professor	Intermittent	0.05	PhD MS MPH MS	University of Minnesota	Nursing Environmental & Occupational Health Maternal & Child Health Public Health Nursing	Public Health Practice	
Prizment, Anna	Adjunct Associate Professor	Intermittent	0.05	PhD MPH MS	University of Minnesota University of Minnesota Lomonosov Moscow University	Cancer Epidemiology Epidemiology Chemistry	Epidemiology	
Punyko, Judith	Lecturer	Intermittent	0.05	PhD	University of Minnesota	Nutrition/Biochemi stry	Epidemiology	
Roberts, Jess	Lecturer	Intermittent	0.05	MArch	University of Minnesota	Architecture	Public Health Practice	
Robertson, Samuel	Lecturer	Intermittent	0.05	МРН	University of Minnesota	Public Health Administration & Policy	Public Health Practice	
Sanem, Julia	Affliate Faculty	Intermittent	0.05	PhD MPH	University of Minnesota	Epidemiology	Community Health Promotion	
Sedaghat, Sanaz	Assistant Professor	Assistant Professor	1	PhD ScD MSc	Eramus University Medical Center, Netherlands Institute of Health Sciences	Clinical Epidemiology Genetic Epidemiology Clinical Epidemiology	Epidemiology	
Shaukat, Aasma	Adjunct Professor	Adjunct Professor	0.1	MD MPH	Johns Hopkins University	Public Health	Environmental Health Sciences	
Siegel, Lianne	Assistant Professor	Assistant Professor	1	PhD	University of Minnesota	Biostatistics	Biostatistics	

Non-Primary Instructional Faculty Regularly Involved in Instruction							
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Smith, Kirk	Lecturer	Intermittent	0.05	PhD MS DVM	University of Georgia Iowa State University Iowa State University	Veterinary Parasitology Veterinary Preventive Medicine Veterinary Medicine	Public Health Practice
Stang, Jamie	Associate Professor	Associate Professor	0.9	PhD MPH	University of Minnesota University of North Carolina - Chapel Hill	Nutrition Public Health Nutrition	Public Health Nutrition
Stuttgen, Kelsey	Lecturer	Intermittent	0.05	PhD	Johns Hopkins University	Human Genetics	Public Health Administration & Policy
Toscano, William	Lecturer	Intermittent	0.05	PhD MS	University of Illinois - Urbana Indiana University of Pennsylvania	Biochemistry Analytical Chemistry	Public Health Practice
Tummala, Sarah	Senior Teaching Specialist	Senior Teaching Specialist	1	MEd MPH	University of Minnesota	Adult Education Community Health Education & Health Promotion	Undergraduate
Turnham, Lisa	Adjunct Instructor	Intermittent	0.05	MPH	University of Minnesota	Maternal & Child Health	Maternal & Child Health
Ward, Andrew	Adjunct Associate Professor	Intermittent	0.05	PhD MPH PhD MPhil MA	University of Minnesota University of Minnesota University of Kansas - Lawrence University of Kansas - Lawrence University of Kansas - Lawrence	Health Services Research, Policy & Administration Public Health Administration Philosophy Philosophy Philosophy	Health Services Research, Policy & Administration

Non-Primary Instructional Faculty Regularly Involved in Instruction							
Name*	Academic Rank^	Title and Current Employment	FTE or % Time Allocated	Graduate Degrees Earned	Institution(s) from which degree(s) were earned	Discipline in which degrees were earned	Concentration affiliated with in Template C2-1
Wells, Scott	Professor	Intermittent	0.05	DVM PhD	Michigan State University University of Minnesota	Veterinary Medicine	Public Health Practice
Wherry, Kael	Lecturer	Intermittent	0.05	PhD MS	University of Minnesota	Health Services Research, Policy & Administration	Health Services Research, Policy & Administration
Wilt, Timothy	Adjunct Professor	Intermittent	0.05	MD MPH	University of Illinois College of Medicine University of Minnesota	Internal Medicine Epidemiology	Health Services Research, Policy & Administration
Wiringa, Peter	Teaching Specialist	Intermittent	0.05	MGIS	University of Minnesota	Geographic Information Science	Public Health Practice
Wu, Joel	Adjunct Assistant Research Professor	Intermittent	0.05	JD MA MPH	Case Western Reserve University Case Western Reserve University University of Minnesota	Bioethics, Law Bioethics Epidemiology	Public Health Administration & Policy
Wurtz, Rebecca	Associate Professor	Associate Professor	0.9	MD MPH	Harvard University University of Illinois - Chicago	Medicine Biostatistics	Public Health Administration & Policy

3) Include CVs for all individuals listed in the templates above.

Faculty CVs can be found in the Electronic Resource File within the Criterion E folder, in the E1.3 subfolder.

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

Definitions for SPH faculty are as follows:

- <u>Primary Instructional Faculty</u>: Tenure, tenure-track or full-time contract faculty are considered 100% or 1.0 FTE, and/or those who have regular responsibility for instruction.
- <u>Non-Primary Instructional Faculty</u>: May be non-SPH faculty, part-time (less than 1.0FTE), intermittent (hired to teach on a non-regular basis), have no teaching responsibilities, affiliate faculty, emeritus faculty, or new faculty within the first three years of their appointment and do not yet teach.
- 5) If applicable, assess strengths and weaknesses related to this criterion and plans for improvement in this area.

Strengths

• The breadth and depth of the faculty education and experience provide a rich learning environment for SPH students.

Weaknesses

• None.

E2. Integration of Faculty with Practice Experience

To assure a broad public health perspective, the school employs faculty who have professional experience in settings outside of academia and have demonstrated competence in public health practice. Schools encourage faculty to maintain ongoing practice links with public health agencies, especially at state and local levels.

To assure the relevance of curricula and individual learning experiences to current and future practice needs and opportunities, schools regularly involve public health practitioners and other individuals involved in public health work through arrangements that may include adjunct and part-time faculty appointments, guest lectures, involvement in committee work, mentoring students, etc.

1) Describe the manner in which the public health faculty complement integrates perspectives from the field of practice, 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.

One way that we integrate perspectives from the field of practice is through our partnership with the Minnesota Department of Health (MDH). Not only do many of our students conduct their Applied Practice Experience at MDH or work there as student workers, but many of our alumni also work at MDH. This intersection helps maintain a strong working relationship between SPH and MDH. For example, our alumni employed at MDH are enthusiastic preceptors for Applied Practice, and supervisors for student internships. Our MDH partners serve as guest lecturers in our courses, and provide valuable feedback on our curriculum.

We also integrate perspectives from the field of practice by hiring faculty with prior practice experience. In fact, four tenured faculty members in the Division of Environmental Health Sciences worked for MDH before joining the SPH faculty: Professors Jeff Bender, Craig Hedberg, Michael Osterholm, and Professor Elizabeth Wattenberg. These individuals bring valuable practice experience to their research and teaching, while also contributing to the strong relationship with MDH. As an example, these faculty support COVID-19 response efforts and also provide graduate students to support MDH's efforts with limited personnel for data management and development of protocols, communications, and educational materials. In addition, Professor Linda Frizzell, a contract faculty member in the Division of Environmental Health Sciences, holds extensive practice experience as a provider and administrator with Indian Health Service. Professor Frizzell directs the American Indian Public and Wellness certificate.

SPH also employs public health practitioners as affiliate faculty who both teach courses and give guest lectures. In our Summer Public Health Institute, public health practitioners teach several courses, including *Environmental Justice, Policy and Practice* (Amira Adawe, MPH, Founder, Executive Director, The Beautywell Project teachers); *Public Health Law* (Anne Barry, Public Health Director of Ramsey County); *Incident Management Systems: The Public Health Role* (Cheryl Peterson-Kroeber, Director of Emergency Preparedness and Response at the Minnesota Department of Health).

SPH also has an outstanding formal mentor program that connects currently enrolled SPH-students to professionals to help with career discernment, networking, and professional development. Our program serves more than 400 mentorship pairs annually with special events and helpful resources. Most mentors in the program work outside of SPH as public health practitioners. Staff seek to match strong pairs based on interests, experiences, and preferences of both students and mentors. The SPH mentor program runs from October through April of each academic year. The program kicks off late October with an event that offers participants the chance to meet their mentors and each other while learning about the program. The year concludes with an appreciation dinner. While mentorship pairs decide together at the outset how often to connect and what to cover during meetings, the program does encourage monthly meetings at

minimum. The program also provides tools and resources to help guide mentorship conversations. Due to Covid-19, formal program events will continue virtually in the 2021 – 2022 academic year.

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

Strengths

- Through the mentor program, we hand match students with mentors based on self-identified interests, experiences, and preferences. This makes for better and strong matches overall, and an outstanding introduction to public health practice.
- We have a long standing close and productive relationship with the Minnesota Department of Health.
- We incorporate public health practitioners into our programs, through which they teach courses and contribute guest lectures.

Weaknesses

- Currently, the diversity of our mentors does not match the diversity of our student body. Therefore, the mentor program is prioritizing recruiting more diverse mentors to connect with students, as we recognize this is highly valued by our students and essential to the future success and relevance of the mentor program.
- We need to increase the diversity of public health practitioners who are affiliate faculty and contribute to teaching.

E3. Faculty Instructional Effectiveness

The school ensures that systems, policies and procedures are in place to document that all faculty (full-time and part-time) are current in their areas of instructional responsibility and in pedagogical methods.

The school establishes and consistently applies procedures for evaluating faculty competence and performance in instruction.

The school supports professional development and advancement in instructional effectiveness.

1) Describe the 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.

Primary faculty are required to participate in training activities to maintain and improve teaching each year. Non-primary instructional faculty are also encouraged to pursue these opportunities. For example, the University of Minnesota supports a University-wide unit called the Center for Educational Innovation (CEI) <u>https://cei.umn.edu/homepage</u>. CEI provides a variety of workshops and teaching resources, in addition to cohort programs, such as the mid-career teaching program. For AY 2020 – 2021, all faculty were required to attend a workshop on anti-racist pedagogy taught by experts from the College of Education and Human Development. All instructors, primary and non-primary, who teach the fully online courses required for our MPH programs, work closely with instructional designers from our office of E-Learning Services. The instructional designers hold expertise in pedagogy and teaching and learning online. University Senate policy requires the evaluation of all courses taught at the University, including those taught by non-primary faculty. Student Rating of Teaching (SRT) evaluations are managed at the University level for all courses. Annual merit reviews, along with tenure and promotion evaluations, include assessment of reports on teaching activity, including SRTs.

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.

Course evaluations

Promotion and tenure processes require evaluation of teaching effectiveness, including course evaluations (as required by University Senate policy for all courses taught at the University). The Office of Measurement Services administers the course evaluations, called the Student Rating of Teaching (SRT), and SPH students use a Likert scale to rate teaching effectiveness of the following statements:

- The instructor was well prepared for class.
- The instructor presented the subject matter clearly.
- Interactions with the instructor helped me learn.
- The instructor treated me with respect.
- The instructor provided feedback intended to improve my course performance.
- I would recommend this instructor to other students.
- The instructor facilitated learning activities that deepened my understanding of health inequalities.
- I have a deeper understanding of the subject matter as a result of this course.
- My interest in the subject matter was stimulated by this course.
- Instructor technology employed in this course was effective.
- The activities in this course supported my learning.
- The amount of effort needed to be successful in this course is reasonable.
- The grading standards of this course were clear.
• I would recommend this course to other students.

Students also have the option to submit anonymous written comments in response to the questions:

- What did the instructor do that most helped your learning?
- What suggestions do you have for improving the course?
- What were the strengths of this course?

Peer review

In 2021 – 2022, SPH launched a peer review process both to help instructors enhance teaching and learning, and to evaluate teaching effectiveness as part of the tenure and promotion process and annual merit review. A teaching effectiveness committee was formed to define and develop criteria and benchmarks for effective teaching for SPH, as well as to develop a process and select tools for peer review. Ten faculty members coming up for tenure and promotion during AY 2021 – 2022 formed the first cohort to undergo peer review.

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 nonprimary instructional faculty.

Primary faculty participate in mandatory training activities to maintain and improve teaching each year. SPH also encourages non-primary instructional faculty to pursue these opportunities, which include formal programs offered by the University and the School of Public Health. Three examples of program support for continuous improvement in faculty's instructional roles include: 1) The Division of Epidemiology and Community Health hosts a seminar series that includes at least one session on teaching and learning; 2) The Division of Biostatistics hosts a monthly meeting for faculty focusing on issues in pedagogy; and 3) In fall 2021, the Division of Environmental Health Sciences launched a monthly "Lunch and Learn" series on teaching and learning.

Below, we describe three additional examples of University and SPH support for continuous improvement in faculty instructional roles.

Training through the University-wide unit called the Center for Educational Innovation (CEI) <u>https://cei.umn.edu/homepage</u>.

CEI provides a variety of workshops and teaching resources, in addition to cohort programs, such as the mid-career teaching program. As shown below, the number of SPH faculty, which can include both primary and non-primary faculty, who participated in consultations and workshops/webinars increased substantially between AY 2018 – 2019 and AY 2020 – 2021.

	AY 2018-2019	AY 2019-2020	AY 2020-2021
Consultations	15	26	65
Workshops/Webinars	65	56	144
Programs	4	3	1
Total	84	85	210

SPH participants in CEI events and services

School of Public Health workshop on anti-racist pedagogy

The Training and Development committee (a subcommittee within the Educational Policy Committee), along with the Diversity, Equity & Inclusion (DEI) director, collaborated with the University's College of

Education and Human Development to create a <u>two-part workshop</u> for all faculty on antiracism pedagogy and curriculum updates in advance of the 2020 – 21 academic year. The asynchronous modules, led by trainers specializing in DEI, drew attendance from 118 faculty and who also completed independent work coinciding with each module. Approximately 90% of faculty completed the training with very positive feedback.

The subcommittee described above continues to support anti-racist pedagogy in myriad ways, from promoting webinars and workshops offered by the Center for Educational Innovation to developing a model for a small cohort of faculty to participate each year in the Antiracist Pedagogy Across the Curriculum (ARPAC) Institute (organized by St. Cloud University). ARPAC provides intensive professional development for faculty committed to incorporating antiracist pedagogy into their courses.

Formal review of MPH core courses by a subcommittee of the education and policy committee

The curriculum subcommittee of the SPH Education and Policy Committee reviews evaluations for MPH core courses required for all MPH students. These courses serve as the foundation of the MPH and have a far reach. For each of these courses, committee members receive and review Student Rating of Teaching (SRTs), considering both quantitative scores and student comments. The committee meets to discuss the SRTs and to flag poorly reviewed courses so that those instructors can be contacted for consultation and to develop a plan for improvement.

The SRTs rate the instructor in several areas of teaching effectiveness, as described above in 2). The rating scale is as follows, where high scores reflect positively on teaching effectiveness:

- 1: Strongly Disagree
- 2: Disagree
- 3: Somewhat Disagree
- 4: Somewhat Agree
- 5: Agree
- 6: Strongly Agree

In 2018 and 2019, the instructors for two of the core courses PubH 6102 Issues in Environmental and Occupational Health and PubH 6250 Foundations of Public Health received median ratings below 3 and 4 for overall teaching ability. Accordingly, the student comments reflected dissatisfaction. Based on the SRTs, the curriculum committee recommended that the courses be revised. The original instructors agreed to step down from teaching the courses and let new instructors take over. The new instructors collaborated closely with skilled instructional designers from the Office of E-Learning Services to redevelop the courses. The median ratings for the new courses increased to 5s and 6s, with positive student comments.

When the MPH core courses were reviewed by the curriculum committee in 2020, all courses had median scores between 4.5 and 6.

4) Describe the role of evaluations of instructional effectiveness in decisions about faculty advancement.

We evaluate teaching effectiveness—including data from course evaluations—for promotion and tenure, and, beginning in AY 2021 – 2022, we began incorporating peer review into this process. To support faculty in this arena, we provide consultation and mentoring to evaluate and improve teaching effectiveness prior to promotion and tenure evaluations. This strategy helps maintain high quality teaching in the School of Public Health. When necessary, divisions may initiate plans for improving teaching effectiveness for faculty members. For example, faculty may be referred to CEI for consultations, workshops, and enrollment in special teaching development programs.

5) Select at least three indicators, with one from each of the listed categories that are meaningful to the school or program and relate to instructional quality. Describe the school or program's approach and progress over the last three years for each of the chosen indicators. In addition

to at least three from the lists that follow, the school or program may add indicators that are significant to its own mission and context. Schools should focus data and descriptions on its public health degree programs.

Faculty Currency: *Peer/internal review of syllabi/curricula for currency of readings, topics, methods, etc.* In 2021 – 2022, SPH launched a peer review process for teaching. Peer review supports instructors in improving both teaching and learning, and informs our evaluation of teaching effectiveness as part of the tenure and promotion process and annual merit review. We formed a teaching effectiveness committee to define and establish criteria and benchmarks for effective teaching for SPH, and to develop a process and select tools for peer review. As mentioned, ten faculty members coming up for tenure and promotion during AY 2021—2022 represented the first cohort to undergo peer review. Prior to instituting peer review, student course evaluations served as the primary means of evaluating faculty currency. These course evaluations also invite student comments in response to questions regarding the strengths of the course and areas that need improvement. In addition, the subcommittee of the Education and Policy Committee reviews all syllabi for new and revised courses. The full Education and Policy Committee votes to approve new and revised courses. Furthermore, each division has a curriculum/education committee that reviews courses, addresses issues, and provides guidance for instructors.

Faculty Instructional Technique: Student satisfaction with instructional quality

The curriculum subcommittee of the SPH Education and Policy Committee reviews the course evaluations, which assess student satisfaction with instructional quality, for all of the MPH core courses. This committee focuses on the foundational courses required for all MPH students. Committee members receive the Student Rating of Teaching (SRTs) for each course and review both quantitative scores and student comments. During their meetings, the committee flags courses with low ratings/comments of concern so that those instructors can be contacted for consultation and to develop a plan for improvement.

The SRTs rate the instructor on a scale of 1 - 6 in several areas of teaching effectiveness (as described above in E3.2), and high scores reflect positively on teaching effectiveness:

- 1: Strongly Disagree
- 2: Disagree
- 3: Somewhat Disagree
- 4: Somewhat Agree
- 5: Agree
- 6: Strongly Agree

In 2018 and 2019, the instructors for two of the core courses PubH 6102 Issues in Environmental and Occupational Health and PubH 6250 Foundations of Public Health received median ratings below 3 and 4 for overall teaching ability. Accordingly, the student comments reflected dissatisfaction with the courses. Based on the SRTs, the curriculum committee recommended that the courses be revised. The courses were substantially revised in close collaboration with skilled instructional designers from the SPH Office of E-Learning Services. The median ratings for the revised courses increased to 5s and 6s, with positive comments from the students.

When the curriculum committee reviewed the MPH core courses in 2020, all had median scores between 4.5 and 6.

School-Level Outcomes: Courses that integrate technology in innovative ways to enhance learning The School of Public Health has a long history (more than 20 years) of teaching fully online, asynchronous courses to better serve our diverse student body. We have full-time students, part-time students, and mid-career working public health professionals located all over Minnesota, the US, and the world. Online courses provide flexibility to our students who are all balancing work, school, and service to communities and organizations. For example, we offer all of the MPH core courses online, and 80% of students choose the online format over in person. Our very high-quality online courses are made possible in part by the fact that we have our own SPH office of E-Learning Services (ELS) staffed by instructional designers with deep expertise in online teaching and learning as well as adult education, curriculum design, and instruction. The instructional designers collaborate with faculty on course design and delivery. Designing online courses differs significantly from designing in-person courses. Making full and effective use of the technology requires design expertise. Toward that end, our course designers collaborate with instructors to ensure that courses inspire engagement on all levels—content, instruction, and student participation. As an example of how SPH integrates technology to enhance student learning, ELS designed and implemented course templates for all of the online courses. The templates serve to improve student experience by ensuring navigability of the courses and easy access to course materials, lectures, and assignments. The director of ELS reviews the course evaluations for all online courses to flag any issues, and maintains the high-quality delivery of online education. The success of our MPH core courses has led to the development of many other online courses. Indeed, our online course offerings have increased substantially between AY 2018-2019 and AY 2020-2021, as shown below.

	AY 2018-2019	AY 2019-2020	AY 2020-2021
# fully online courses	68	81	89

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

Strengths

- We have many resources to support continuous improvement of teaching effectiveness.
- We pay careful attention to the quality of the MPH core courses, which have a far reach because they are required for all MPH students. SPH has a committee devoted to the evaluation of these courses.
- SPH has a long history of offering high-quality online courses that have a far reach and provide flexibility for our large and diverse student body. Our online courses use technology skillfully used courses to provide a high-quality student experience.

Weaknesses

• SPH only recently implemented peer-review of teaching.

E4. Faculty Scholarship

The school has policies and practices in place to support faculty involvement in scholarly activities. As many faculty as possible are involved in research and scholarly activity in some form, whether funded or unfunded. Ongoing participation in research and scholarly activity ensures that faculty are relevant and current in their field of expertise, that their work is peer reviewed and that they are content experts.

The types and extent of faculty research align with university and school missions and relate to the types of degrees offered.

Faculty integrate research and scholarship with their instructional activities. Research allows faculty to bring real-world examples into the classroom to update and inspire teaching and provides opportunities for students to engage in research activities, if desired or appropriate for the degree program.

Introduction

We are a Carnegie Foundation designated Research 1 institution *and* we are the flagship institution of higher learning in our state. As one of the early public university schools of public health (est. 1944), our scholarly work plays a large role in our consistently high reputation among all schools of public health. For example, the commonly used *US News & World Report* rankings based on reputation have rated SPH among the top ten since they first published in 1983. Even though we are 8th or 9th in size among these peer schools based on number of faculty, we are 5th to 7th in average grants and contracts dollars brought in per faculty member from 2018 – 2020, 5th in NIH awards per faculty member in FY 2020, and 4th in average NIH award dollars brought in per faculty member in FY 2020.

<u>We value the full spectrum of faculty scholarly work</u>. Our UMN - Twin Cities campus is a <u>Carnegie</u> <u>Foundation designated "Community Engaged" campus</u>. And SPH research encompasses the entire spectrum of engagement: *To* communities (generating new knowledge in the public interest), *For* communities (community focused research), *In* communities (community based research), and *With* communities (community based participatory research and community based participatory action research). As we will describe below, our faculty's scholarly activity increases both the magnitude and reach of our impact. Furthermore, we support scholarly activity through networks and resources.

Please find visual representations of our faculty's research and collaboration across the SPH and the world in the Electronic Resource File, Criterion E folder, E4 subfolder.

1) Describe the school's definition of and expectations regarding faculty research and scholarly activity.

Institutional and school policy expectations for scholarly activity are high.

Scholarly activity requires a high level of expertise. It should be innovative, significant, and impactful. As a Carnegie Foundation Research 1 institution, the University's expectations for faculty participation in scholarly activity are high, starting with the <u>Board of Regents Policy on Faculty Tenure</u>, which says, "faculty have the responsibility of furthering the institution's programs of research, teaching, and service..." (Board of Regents Policy on Faculty Tenure, Preamble). It further states, "the basis for awarding indefinite tenure ... is the determination that each [faculty member] has established and is likely to continue to develop a distinguished record of academic achievement that is the foundation for a national or international reputation or both" (Board of Regents Policy on Faculty Tenure, section 7.11).

This expectation of a "distinguished record" is underscored in our school's <u>Appointment, Promotion, and</u> <u>Tenure Policy</u> (for tenure-track/tenured faculty) and our school's <u>Appointment and Promotion Policy</u> (for contract faculty), both of which state the goal ... "to identify and reward teachers and scholars who demonstrate a commitment to the advancement, communication, and utilization of knowledge and who show promise of pursuing productive academic careers."

Institutional and school definitions of scholarly activity emphasize dissemination.

At our institution, scholarly research "must include significant publications and, as appropriate, the development and dissemination by other means of new knowledge, technology, or scientific procedures resulting in innovative products, practices, and ideas of significance and value to society" (Board of Regents Policy on Faculty Tenure, section 7.11). Thus, scholarship requires the key step of dissemination. We are in the midst of a revolution in how scholarly work is disseminated: it is no longer accomplished only with dissemination to the academic community (through traditional peer-reviewed journals), but also through dissemination to community stakeholders and the general public ("science communication" via media interviews and interactions, social media posts, blogs, newsletters, videos, and more). These types of non-traditional dissemination venues to community stakeholders are valued by our institution, as demonstrated in the UMN Office of Public Engagement's criteria for excellence in community-engaged scholarship. It is not just individual faculty in our school who are pursuing these new dissemination pathways. We participate at the school level as well through our Health in All Matters podcast and a recent documentary in collaboration with Twin Cities Public Television, No Longer Invisible: Public health during the COVID-19 pandemic. Expanding and deepening our dissemination pathways are critical to broadening the impact of our scholarly work.

SPH values scholarly activity that aligns with the missions of the University and the SPH. Ongoing participation in research and scholarly activity ensure that faculty are relevant and current in their discipline. Faculty contribute to the missions of the University of Minnesota and of the SPH through their research expertise. The University of Minnesota is "... founded in the belief that all people are enriched by understanding; is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to the benefit of the people of the state, the nation, and the world." The SPH mission, as stated in section B1, is "The School of Public Health improves the health and well-being of populations and communities around the world through excellence in research and education, and by advancing policies and practices that sustain health equity for all." Our research goal, as stated in section B1, serves as a guide to help further define expectations regarding faculty research and scholarly activity: "Conduct, translate, and disseminate research to shape public health solutions, policies, and practices that will reduce health inequities."

Lastly, we are proud to have launched in July 2021 a school-wide <u>Strategic Plan for Antiracism</u>. Goal 4 in the focus area of "Faculty" states: "Institute faculty appointment, promotion, and tenure criteria and processes, and annual performance review criteria and processes, that demonstrate the high value the school places on antiracism and DEI-related research, teaching, and service." We have already made such changes in our tenure/track tenured faculty <u>Appointment, Promotion & Tenure Policy</u> (see, e.g., p.4-5, Section III.A.3.b, items (6) and (7) which are new research- and scholarship-related criteria).

2) Describe available university and school support for research and scholarly activities.

The University and school support research and scholarly activities through the following:

- A. Practices that support research and scholarly activity
- B. Nomination of faculty for awards
- C. University and SPH funding to support research and scholarly activity
- D. Institutional and SPH-based research and policy centers

A. Practices that support research and scholarly activity.

SPH fosters a school-wide culture of leadership supporting faculty. This begins during the onboarding processes for new faculty hires, during which we emphasize communication between leadership and the new hire. Each member of the school's leadership meets with each new hire within \sim 4 – 8 weeks of their arrival (dean, all associate deans, director of communications, director of diversity, equity & inclusion,

assistant director of human resources, chief development officer, assistant dean of learning Innovations, and division head). Importantly, the meeting with the associate dean for faculty affairs is an opportunity for the associate dean to learn about the new hire's scholarship, teaching, and service, and to discuss school promotion policies and processes. During this meeting, the associate dean discusses mentoring and making connections across the school, beyond the division in which the new hire sits. A subsequent meeting with the administrator of the Office of Faculty Affairs helps to further illuminate these processes for new faculty hires, who also meet with faculty and support staff within their divisions. And, each spring, the associate dean for faculty affairs holds a group meeting with all hires from the past year; attendees discuss how the first year is going, identify desired networking opportunities, resources, and outside expertise, and share any hurdles or barriers they have encountered. Divisions also offer new hires reduced teaching in their first year in order to give them more time to acclimate, finish up work from their prior position, and set up their research program. The associate dean for research leads the SPH research committee composed of faculty, staff, and student representatives across divisions to quide the implementation of the research strategic plan. Accordingly, a number of school-wide research initiatives seek to support research and scholarship, including research-related development, centralized technical support for grant submissions, and networking and collaborative opportunities. The associate dean has also established "Research Notes," a routinely sent email that includes local and national funding opportunities, research development workshops sponsored by the associate dean's office and others, and regional and national policy briefs relevant to faculty research.

We place critical importance on <u>mentoring of faculty</u>. Division heads ensure that two senior faculty members, along with the division head and associate dean for faculty affairs, mentor faculty all the way from hiring through their promotion process. Many such mentoring relationships result in scholarly or teaching collaborations. The associate dean for faculty affairs and the associate dean for research can also facilitate within-institution cross-disciplinary connections to potential additional mentors or new scholarly collaborators. Several of our senior faculty have won awards for the mentoring of faculty, most recently Cavan Reilly, <u>Biostatistician Mentor of the Year</u> (2018) from the UMN and NIH-funded <u>Clinical and Translational Science Institute</u> (CTSI). The CTSI also runs a mentoring workshop, the <u>Mentoring Excellence Training Academy</u> (META), that encompasses concepts and practices important for junior faculty mentoring. Seven SPH faculty members participated in this training during 2018 – 2020.

SPH <u>leadership also supports faculty research scholarly work through year-long sabbatical and single-</u> <u>semester leave programs.</u> Since 2018, SPH has supported six year-long sabbatical leaves and 9 singlesemester leaves. For example, leaves were granted to faculty members for the following research projects:

- Professor Saonli Basu, 2018 2019: Initiate a cancer bioinformatics collaboration with Tata Medical Center (Kolkata, India) and Johns Hopkins University.
- Professor Lynn Blewett, fall 2019: Complete a book based on course materials developed with a state senator on state health care financing and politics.
- Professor Kathleen Call, 2020-2021: Explore race-based and insurance-based discrimination in health care services based on state health care access data.
- Associate Professor Hyun Kim, calendar year 2021: Join the Climate Change and Health Unit at the World Health Organization's headquarters to complete the development of a climate-sensitive disease early warning system.
- Professor Ellen Demerath, 2021 2022: Work with collaborators locally, at University of California, San Diego and Harvard, in Croatia, and in the Netherlands to grow a breast milk research program into new areas such as the intersection of nutrients, microbiome, and neurodevelopment.

SPH also provides <u>explicit support from leadership for our faculty of color</u>. The <u>director of diversity</u>, <u>equity & inclusion</u>, along with a new staff member, lead a faculty of color affinity group through which faculty of color can bring concerns to the attention of SPH leadership without feeling jeopardized by the power structure inherent in academic hierarchies. The associate dean for faculty affairs has also implemented implicit and explicit bias training for members of SPH's appointment, promotion & tenure committee and for chairs of faculty search committees. These trainings focus on the role that committee chairs play in setting the tenor of evaluation and discussion in search committee meetings.

The associate dean for faculty affairs recently implemented <u>new initiatives in writing support</u> for faculty. The first initiative is formal, regularly scheduled internal grant reviews, three times per year (January, May, and September). Senior faculty volunteer to act as reviewers for draft grants from junior faculty, with reviewing pairs matched by the associate dean. The second initiative is semester-long peer-supported grant writing groups of 2 - 3 junior faculty members. An iterative schedule repeats itself over the course of the semester, with each two-week period focused on a different, small section of a grant proposal (eight weekdays devoted to writing followed by two weekdays devoted to reviewing sections written by fellow members). Additional initiatives planned to begin in fall 2021 will focus on manuscript writing support.

SPH also provides administrative support for research and scholarly activities. This includes staff at the school and division levels who work with faculty on finances and grants administration, and human resources. The physical resources required to support research and scholarly activity, including offices and laboratories, is described in section C4. Physical Resources.

There is also an *institutional culture of supporting faculty*. UMN maintains an institutional membership with the <u>National Center for Faculty Development and Diversity</u> (NCFDD). All faculty have access to their webinars and workshops, writing groups, discussion fora, the 12-week 'Faculty Success Program' (in which several of our faculty participate each year), and other offerings. Importantly, the UMN Provost's Office and the SPH Office of Faculty Affairs subsidize about 3/4 of the cost of the 12-week program; division funds or a faculty member's start-up funds cover the remainder. The UMN and NIH-funded <u>Clinical and Translational Science Institute</u> also offers funded <u>career development programs</u> (described further under "Funding to support scholarly activity"), regular <u>seminars/webinars</u>, short self-paced <u>training courses</u> (with topics for both faculty and research staff), and a <u>grant library</u>. The <u>Women's Faculty Cabinet</u> holds regular events to facilitate networking, and discuss institutional policies and practices, among women-identified faculty. This usually includes a University-wide conversation with the provost and a spring retreat. UMN also hosts <u>MNREACH</u>, an NIH-funded research evaluation and commercialization hub, to foster the development and application of therapeutics, preventatives, diagnostics, devices, and tools. MN-REACH provides guidance, concept development, and application support to faculty through a comprehensive SBIR/STTR proposal development system.

B. Nomination of faculty for awards.

Our scholarly support includes public recognition for especially meritorious activities. The associate dean for faculty affairs manages annual meetings of SPH leadership to discuss plans for nominating faculty for health sciences, institutional, and national awards. Division heads typically manage the nominations for discipline-specific awards.

Recent examples of such awards are the following:

- <u>McKnight Presidential Fellows</u>: Rachel Hardeman (2020) and David Vock (2019)
- McKnight Land Grant Professor: Nicole Basta (2019)
- <u>Distinguished McKnight University Professors</u>: Katy Kozhimannil (2021) and Mellissa Laska (2019)
- Josie R. Johnson Human Rights and Social Justice Award: Rachel Hardeman (2019)
- <u>Global Engagement Award;</u> William Toscano (2020)
- <u>President's Community Engaged Scholar</u>: Marizen Ramirez (2021), Tetyana Shippee (2020), and Ruby Nguyen (2019)
- 25th Heinz Award in Public Policy: Katy Kozhimannil (2020);
- Matilda White Riley Early Stage Investigator Award: Jaime Slaughter-Acey (2020)
- <u>Courage Award presented by Planned Parenthood North Central States</u>: Rachel Hardeman (2020)
- <u>American Heart Association Key's Lecture</u>: Aaron Folsom (2019)

C. University and SPH funding to support research and scholarly activity.

The University of Minnesota has several funding mechanisms. We provide a list of internal funding opportunities on this website: <u>https://apps.research.umn.edu/A/Intramural/internal_funding.aspx</u>. Examples are given below.

<u>Grant-in-Aid of Research, Artistry, and Scholarship</u>. This award averages approximately \$35,000. The money can be used over 18 months. Categories of awards inclined the following: new assistant professor; new research direction; multicultural research; fields with limited external funding; shared equipment; special requests for pilot projects; and bridge funding.

<u>Social Justice Impact Grants</u> (maximum \$50,000 per project over 12 months). These grants support research that holds high potential for building a more equitable and just society, future external funding, and career advancement, with priority given to applications that will benefit Minnesota communities.

<u>Minnesota Futures</u> (maximum \$250K per project over 24 months). This program "promotes new research and scholarship that takes a bold, creative, and transdisciplinary approach to addressing our biggest societal challenges [and to] advance the disciplines involved in ways that will enrich the lives of Minnesotans and beyond."

<u>Matching Funds program</u> provides matching funds for certain grant proposals to external sponsors on an ongoing basis.

<u>Research Infrastructure Investment Program</u> provides funding that supports research infrastructure in order to ensure the viability of critical facilities and research support services.

<u>COVID-19 Rapid Response Grants</u> (maximum \$10K for 12 months). These grants focus on research that informs near real-time decision making for professionals tasked with making operational response decisions.

The UMN Center for Global Health and Social Responsibility (CGHSR) has a <u>seed grant program</u>, a <u>mentoring fund</u>, and provides <u>travel support</u>.

<u>MnDRIVE</u> (Minnesota's Discovery, Research, and InnoVation Economy). This partnership between the University of Minnesota and the State of Minnesota aligns areas of research strength with the state's key and emerging industries to address grand challenges. MnDRIVE receives \$22 million annually from the state to support research in five strategic areas—<u>Robotics, Global Food, Environment, Brain</u> <u>Conditions</u>, and <u>Cancer Clinical Trials</u>.

<u>MIN-Corps</u> is a National Science Foundation I-Corps site, to foster innovation and translation. MNREACH offers funding as well as substantial <u>skills development</u> for investigators (translation, commercialization, intellectual property, regulation, markets, appropriate academic roles, etc.), similar to the MIN-Corps <u>seminars, workshops, etc</u>. and conferences such as the <u>Women Innovators Conference</u>.

The <u>UMN Informatics Institute</u> has a seed grant fund. These grants promote, catalyze, accelerate, and advance UMN-based informatics research, especially research aligned with the MNDRIVE foci. <u>Faculty Research Development Program</u> promotes interdisciplinary research that will lead to future grant submissions to national funding agencies.

SPH funding for scholarly activity includes the following endowed chair positions:

- Leon S. Robertson Professorship in Injury Prevention (Marizen Ramirez)
- <u>Medtronic Faculty Fellow</u> (Thomas Murray)
- Blue Cross Endowed Professor of Health and Racial Equity (Rachel Hardeman)
- Vernon E. Weckwerth Professor in Healthcare Administration Leadership (Jean Abraham)
- James A. Hamilton Professor of Healthcare Management (James Begun)
- James A. Hamilton Chair of Healthcare Management (Jon Christianson)
- Robert L. Kane Endowed Chair in Long-Term Care and Aging (Joe Gaugler)

• Mayo Professorships; awarded periodically by the Dean to SPH faculty for exceptional scholarly accomplishment. The professorships are named after the Drs. William and Charles Mayo whose estates provided the endowment.

The SPH dean and the development and advancement team also facilitate funding for research and scholarship supported by school donors. Recent examples include the following: The <u>Center for</u> <u>Antiracism Research for Health Equity</u>; Aerosol Transport of Microbiological Organisms and Viruses to Humans Fund; Boston Scientific Corporation Biostatistics Fund; Healthy Weight Research Center Fund; Tanzania Cervical Cancer Self-Screening Research Project Fund; and LGBT Health Research Fund.

D. Institutional and SPH-based research and policy centers.

Institutional and SPH-level public health, research, and policy centers offer an immediately accessible network of potential new collaborators and mentors for new faculty hires and for faculty moving into a new research area related to those centers. Some centers also offer small research seed grants or substantial shared resources such as access to data, labs, computing, and staff support. Our faculty are heavily invested in such collaborations, to the extent of developing centers within our school and taking on leadership roles in other institutional centers. In section E5, we describe faculty connections with external partners on scholarly work.

Within UMN, SPH faculty participate heavily in the following centers:

- <u>Clinical and Translational Science Institute</u>: CTSI offers extensive <u>shared resources</u> in addition to the research grant and training opportunities described in sections above. Our faculty also play leadership roles within CTSI. Three faculty are part of the executive leadership team: Tim Beebe is senior advisor for community & collaboration and is on the education leadership team, and Katy Kozhimannil is director, with Carrie Henning-Smith as deputy director, for the <u>Office of Rural Health</u>. Haitao Chu is director of the <u>Biostatistical and Data Analysis Center</u> in CTSI and Michael Oakes, as Director for the <u>Interdisciplinary Research Leaders Program</u>, is a member of the Hub Leadership Team.
- <u>Masonic Cancer Center</u>: The MCC became a National Cancer Institute-designated comprehensive cancer center in 1998 and has substantial <u>shared resources</u>. More than 40 SPH faculty are MCC members, 3 of whom were Masonic Scholars as Assistant Professors. Several faculty also have leadership roles here: Lisa Peterson is co-lead of the Carcinogenesis and Chemoprevention Program and Heather Nelson is co-lead of the Screening, Prevention, Etiology & Cancer Survivorship Program. Chap Le is Director of the MCC Biostatistics Core.
- <u>Center for Infectious Disease Research and Policy</u>: CIDRAP is housed within the office of the Vice President for Research with Michael Osterholm, professor of environmental health sciences, as director. CIDRAP is a global leader in addressing public health preparedness and emerging infectious disease response and has played a monumental role in providing government, academic, and business leaders, researchers, and the public with <u>trusted information</u> during the COVID-19 pandemic.
- <u>Minnesota Population Center</u>: MPC is a University-wide interdisciplinary cooperative for demographic research. MPC supports innovative research in population dynamics around the world by fostering connections among population researchers across disciplines, developing leading-edge collaborative research projects, providing technical and administrative support for demographic research, and training the next generation of interdisciplinary population researchers. SPH faculty member Theresa Osypuk is Associate Director of MPC; Rachel Hardeman, and Jaime Slaughter-Acey. <u>Center for Global Health and Social Responsibility</u>: CGHSR seeks to advance health worldwide, through collaborative partnerships, sustainable programs, and academic excellence. Faculty and graduate student funding opportunities through this center were described above. SPH faculty Rebecca Wurtz is director of interprofessional education programs.
- The UMN <u>Driven to Discover (D2D) research facility</u> at the Minnesota State Fairgrounds was begun with an OVPR Research Infrastructure Initiative grant to faculty member Ellen Demerath and co-PI Logan Spector, School of Medicine. Matching funds came from the SPH, Medical School, and College of Food, Agriculture and Natural Resources Sciences. The mission is to promote greater citizen participation in research; showcase UMN research; support fast,

efficient subject recruitment; provide access to a diverse participant pool; provide the opportunity for unique studies and longitudinal tracking; promote faculty and student engagement; and provide opportunities for cross-UMN collaboration in subject recruitment. During the Minnesota State Fair (attendance ~2 million people over 12 days), UMN (and other locally sourced) research projects recruit and enroll participants into research studies.

- Minnesota Supercomputing Institute: MSI is 30+ years old, and its mission is "to provide advanced research computing infrastructure and expertise to the University of Minnesota research and scholarly community and the State of Minnesota in order to advance and accelerate research and foster innovation and discoveries through advanced computing technologies, scientific computing and informatics, application development, and services." MSI resources are highly leveraged by all the divisions in the school. A recent example is the project "Feature Selection for Support Vector Regression Using a Genetic Algorithm" by Biostatistics PhD student Shannon B. McKearnan, with co-advisors Biostatistics faculty Julian Wolfson and David Vock, which was presented at the <u>2020 MSI Research Exhibition</u>. Beth Virnig serves on the MSI faculty advisory committee.
- <u>University of Minnesota Informatics Institute</u>: UMII serves to connect the research community to services related to managing data across the data life cycle; UMII fosters and accelerates dataintensive research by providing data wrangling, imaging informatics, and analysis pipelines for metagenomics, mass spectrometry and proteomics, and next generation sequencing. We describe faculty and graduate student funding opportunities through this center above (section "Internal funding to support scholarly activity"). Cavan Reilly is on the UMII faculty advisory committee.
- The Office of Academic and Clinical Affairs website also lists <u>other UMN centers</u> that have a medicine and public health focus.

SPH hosts several centers. Examples are described below:

- The <u>Center for Antiracism Research for Health Equity</u> (director, Rachel Hardeman) develops education and training on structural racism and health inequities; fosters authentic community engagement to address the root causes of racial health inequities and drive action; change the narrative about race and racism to one that does not hold up whiteness as the ideal standard for human beings; and serves as a trusted resource on issues related to racism and health equity.
- The <u>Center for Leadership Education in Maternal and Child Public Health</u> (MCH) (director, Sara Benning) offers an online MPH, continuing professional education, and consultation and technical assistance to community-based organizations and agencies. MCH is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services.
- The <u>Center for Violence Prevention & Control</u> (CVPC) (director, Marizen Ramirez) facilitates interdisciplinary collaboration in research that can ultimately affect the prevention and control of violence.
- The <u>Center for Healthy Aging and Innovation</u> (CHAI) (director, Joe Gaugler) advances interdisciplinary aging science; creates meaningful and immersive educational experiences in aging; builds and sustains innovations in care and services; and establishes vibrant community, governmental, business, and individual collaborations to promote healthy aging for Minnesotans and people across the country.
- The <u>Coordinating Centers for Biometric Research</u> (CCBR) (director, James Neaton, assistant director, Cavan Reilly) provides a wide range of expertise in study design, data management and statistics, as well as regulatory and operational management, with substantial experience in infectious disease (HIV, Ebola, COVID-19), eye health, lung health, and cardiovascular disease). Research partners include the National Institutes of Health, the United States Department of Defense, private foundations, national healthcare organizations in multiple countries, and other schools/colleges at UMN.
- The <u>Epidemiology Clinical Research Center</u> (ECRC) (medical director, Kamakshi Lakshminarayan) provides facilities for research in osteoporosis, diabetes, obesity, estrogen, exercise and cardiovascular disease prevention.

- The <u>Minnesota Technical Assistance Program</u> (MnTAP) (director, Laura Babcock) helps Minnesota businesses implement solutions that maximize resource efficiency, prevent pollution, and reduce costs to improve public health and the environment. MnTAP is funded in part by a pass-through grant from the Minnesota Pollution Control Agency's Resource Management and Assistance Division and by other grants from partners including Minnesota Department of Commerce, Division of Energy Resources, Metropolitan Council, counties and other local units of government, EPA Region 5, and energy utilities.
- The <u>Research Data Assistance Center</u> (ResDAC) (director, Beth Virnig) acts as a Centers for Medicare and Medicaid Services (CMS) contractor providing assistance to academic, government and nonprofit researchers interested in using Medicare and Medicaid data for their research.
- The <u>Rural Health Research Center</u> (RHRC) (director, Katy Kozhimannil, deputy director, Carrie Henning-Smith), with funding from the Federal Office of Rural Health Policy in the Health Resources and Services Administration, conducts policy-relevant research to improve the lives of rural residents and families, to advance health equity, and to enhance the vitality of rural communities.
- The <u>State Health Access Data Assistance Center</u> (SHADAC) (director, Lynn Blewett), funded by the Robert Wood Johnson Foundation, is a multidisciplinary health policy research center with a focus on state policy, specifically on generating sound data and producing rigorous, policy-driven analyses.
- The <u>Upper Midwest Agricultural Safety and Health Center</u> (UMASH) (director, Jeffrey Bender) is a Center of Excellence in Agricultural Disease and Injury Research, Education, and Prevention, funded by the National Institute for Occupational Safety and Health (NIOSH) within the Centers for Disease Control (CDC); it brings together unique and complementary expertise to address existing and emerging occupational health and safety issues in agriculture. This collaboration includes SPH, the UMN School of Veterinary Medicine, the Migrant Clinicians Network, the National Farm Medicine Center, and the Minnesota Department of Health.

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.

Example 1: PubH 7420, Clinical Trials: Design, Implementation, and Analysis.

This course is taught by Professor Joe Koopmeiners. Professor Koopmeiners' research involves statistical methods research in the areas of biomarker validation and Bayesian adaptive methods for clinical trials. This course draws on Dr. Koopmeiners' extensive experience in the design, management, and analysis of randomized clinical trials. Multidisciplinary groups of students synthesize their learning of the course topics by completing two projects: 1) critique the protocol of an ongoing or completed clinical trial; and 2) develop a research question and study design for a novel randomized controlled clinical trial, and write a protocol for it.

Example 2: PubH 6049, Legislative Advocacy Skills for Public Health.

This course is taught by Professor Traci Toomey who has research expertise in public health policy, with particular expertise in alcohol control policies. Professor Toomey directs the Alcohol Epidemiology Program, which conducts advanced research to discover effective community and policy interventions to reduce alcohol-related social and health problems. This course draws on Professor Toomey's expertise to instruct students in the skills needed to successfully advocate for public health policy in the state legislative arena. Students work with a lobbyist for a non-profit agency, a legislative staff person or a legislative liaison from a public health organization to follow issues to be addressed during the legislative session.

Example 3: PubH 7200, Section 102, Aspects of Asian American Health.

During summer 2021, our Public Health Institute ran for the first time ever a 1-cr course, "Unique Aspects of Asian American Health" taught by Associate Professor, Dr. Ruby H.N. Nguyen. The Public Health Institute serves both public health professionals seeking continuing education and current graduate students in public health at the University of Minnesota and globally. This survey course incorporates Asian American community partners (with whom Dr. Nguyen has collaborated) in research and

programmatic development. The topics discussed in class have been identified by Asian American community leaders as vital to their communities, and include: hepatitis B, family violence, and disaggregation of Asian data to identify health disparities within this diverse group. Research findings from community-University collaborations are presented, and the impact of this research is discussed (i.e., a statewide prevalence study of violence against Asian American women and children that was presented to the Minnesota Legislature to garner funding for violence prevention). Emphasis remains on needs of those in Minnesota and the upper Midwest states.

4) Describe and provide three to five examples of student opportunities for involvement in faculty research and scholarly activities.

All MS and PhD students conduct research projects mentored by one or more faculty advisors. Notably, we have the fourth smallest faculty/PhD student ratio among the top ten schools. Creating their own, self-driven research portfolio is critically important in PhD and MS programs in particular, and that process often begins with students participating in faculty research and developing and refining their own research skills and interests. This in turn leads to development of the capstone project, thesis, or dissertation project. MPH students complete a practicum that for some students takes place within the context of faculty research.

Just a few examples of student opportunities for involvement in faculty research and scholarly activities are described below:

Example 1: The State Health Access Data Assistance Center (SHADAC).

SHADAC, a multidisciplinary health policy research center, focuses on state policy. At any given time, the SHADAC team includes both masters and PhD student graduate research assistants, who assist in conducting a variety of research tasks on both data and evaluation projects as well as in supporting technical assistance to states. Students have access to a multidisciplinary team of researchers who directly support and inform current state and federal health policy decision making; they gain both qualitative and quantitative research skills and broaden their health policy knowledge base, and there is potential for authorship on blogs, technical briefs, and peer-reviewed publications on issues such as health survey data collection and analysis, health insurance coverage, access to care, health equity, and healthcare delivery system or payment reform.

Example 2: Midwest Center for Occupational Health and Safety (MCOHS).

Since 1977, the MCOHS Education and Research Center has served the Midwest by offering tuitionassisted graduate training programs, continuing education, research-to-practice, and outreach in the field of occupational health and safety. The MCOHS provides training for PhD programs, which involve student-led research as part of their dissertation work, in industrial hygiene, occupational and environmental health nursing, occupational and environmental epidemiology, and occupational injury prevention. The student-led dissertation research in the later years of their PhD program very often evolves from student involvement in faculty research in the earlier years of their PhD program.

Example 3: Data Coordinating Center, Oral-health Consequences of Radiation Therapy for Head-andneck Cancer.

Professor James Hodges leads this Center. Graduate students in Biostatistics work with Professor Hodges as Graduate Research Assistants, gaining experience within a research context in data cleaning and management, statistical summarization and analysis, working with and learning from interdisciplinary teams, and written and verbal communication with those teams.

5) Describe the role of research and scholarly activity in decisions about faculty advancement.

As discussed in more detail in Section E.4.1 above, the <u>role of research and scholarly activities in faculty</u> <u>advancement is described in policy</u> and institutional expectations for faculty participation in scholarly activity are high: "the basis for awarding indefinite tenure ... is the determination that each [faculty member] has established and is likely to continue to develop a distinguished record of academic achievement that is the foundation for a national or international reputation or both" (<u>Board of Regents</u> Policy on Faculty Tenure, section 7.11). Policy changes, interpretations, and related procedures are communicated by the UMN <u>Office of the Executive Vice President and Provost</u> and its <u>Faculty &</u> <u>Academic Affairs</u> team. The Regents' expectation of a "distinguished record" is underscored in our school's <u>Appointment, Promotion, and Tenure Policy</u> (for tenure-track/tenured faculty) and our school's <u>Appointment and Promotion Policy</u> (for contract faculty), which both state that a goal is "to identify and reward teachers and scholars who demonstrate a commitment to the advancement, communication, and utilization of knowledge and who show promise of pursuing productive academic careers."

Accordingly, the evaluation of research and scholarly activity is a critical part of advancement, tenure, and promotion decisions. For example, during the six-year period of probation, all tenure-track faculty receive regular communication about their progress towards promotion, including annual written feedback from their division head, from the appointment, promotion, and tenure committee, and from the dean. The feedback from the division head summarizes a division-level tenured faculty meeting at which the faculty member's dossier is reviewed and discussed prior to a formal vote on whether the tenure-track position should be continued for another year. The process of review, discussion, and vote occurs again at the appointment, promotion, and tenure committee, and again at a meeting of all tenured faculty in the school. The last step involves a summary of the candidate by the dean for the provost, along with the dean's recommendation for continuation (or not) to the provost.

Evaluation of research and scholarly activity is also a critical part of the annual merit review process, which is conducted by Division Heads for all faculty each year.

6) Select at least three of the following 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 that follows, the school may add measures that are significant to its own mission and context.

Outcome Measures for Faculty Research and Scholarly Activities							
Outcome Measure	Target	Year 1 2018-2019	Year 2 2019-2020	Year 3 2020-2021			
Percent of faculty (total faculty) participating in funded research activities	90%	91%	90%	90%			
Total Research Funding Overall Award dollars (this includes both grants and contracts)	\$71,100,000 (\$550,000 per faculty)	\$70,704,075	\$66,962,924	\$267,644,999			
Grant submissions: (count & percent of faculty who submitted a proposal)	80%	94/129 faculty (73%)	98/126 faculty (78%)	89/131 faculty (68%)			
Grants awarded: (count & percent of faculty who had a grant awarded)	85%	83/94 faculty (88%)	82/98 faculty (84%)	81/89 faculty (91%)			

Template E4-1

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

Strengths

- Our school has a strong tradition of impactful faculty research and scholarship, spanning many areas of public health. Our school's strengths show through our extensive dissemination, ongoing grant funding, and faculty receipt of institutional and national achievement awards.
- We recognize the importance of faculty research and scholarship through the advancement, tenure, and promotion policies of the University and SPH. We have substantial procedures and practices in place to support our faculty in their research and scholarship. Institutional and school resources are extensive.
- Our PhD students receive exceptional individualized attention: we have the fourth smallest faculty/PhD student ratio among the top 10 schools of public health. Working closely with faculty on research and scholarship is a major part of SPH PhD training. The student-led research that becomes their dissertation in the later years of their PhD program very often evolves from participation in faculty research in the earlier years of their PhD program.

Weaknesses

• None.

E5. Faculty Extramural Service (SPH and PHP)

The school or program defines expectations regarding faculty extramural service activity. Participation in internal university committees is not within the definition of this section. Service as described here refers to contributions of professional expertise to the community, including professional practice. It is an explicit activity undertaken for the benefit of the greater society, over and beyond what is accomplished through instruction and research.

As many faculty as possible are actively engaged with the community through communication, collaboration, consultation, provision of technical assistance and other means of sharing the school or program's professional knowledge and skills. While these activities may generate revenue, the value of faculty service is not measured in financial terms.

1) Describe the school or program's definition and expectations regarding faculty extramural service activity. Explain how these relate/compare to university definitions and expectations.

Faculty engage in service by consulting with public or private organizations on issues relevant to public health; providing testimony or technical support to administrative, legislative, and judicial bodies; serving as board members and officers of professional associations; reviewing grant applications; and serving as members of community-based organizations, community advisory boards or other groups.

Institutional and school policies codify the expectation of extramural service, and highly value both engagement with our community peers and partners as well as service to our academic peers within our disciplines and professions. Extramural service is integral to our work—so broadly and deeply woven into SPH culture that it profoundly affects our scholarship and educational missions as well. Service and scholarship are mutually reinforced by fostering connections with our communities, thus the service mission also leads to translation of our scholarship into community-relevant impact. Service and our educational mission go hand-in-hand as well; students engage with community groups and community opportunities to see how lessons from the classroom are relevant (or not) and to gain invaluable experience and real-world understanding. In this way, the mission again leads to translation of our educational offerings into community-relevant impact. Our faculty also engage in professional service through professional and disciplinary societies, funding agencies, publishers, workshop and conference planning and implementation, and other organizations and venues. These service activities embody the translation of our professional expertise into discipline-relevant impact.

The <u>Board of Regents Policy on Faculty Tenure</u> lays out institutional expectations, stating, "faculty have the responsibility of furthering the institution's programs of research, teaching, and service..." (Board of Regents Policy on Faculty Tenure, Preamble). SPH mirrors this expectation of service. We define service broadly within the context of our mission, as seen in our school's <u>goals</u>, with Goal 3 focused on community engagement: "Engage and collaborate with partners to advance learning, practice, and scholarship in public health." Goal 4 touches on providing continuing education to community leaders and Goal 5 centers all of our work on the advancement of "diversity, equity, inclusion, justice, and antiracism in our education, research, and community engagement." These themes are further reinforced in our school's <u>Appointment</u>, <u>Promotion & Tenure Policy</u> (for tenure-track/tenured faculty), which states: "Service is an important supplementary component of the candidate's activities... and the significance of the candidate's service should be documented."

2) Describe available university and school or program support for extramural service activities.

Our school fully supports faculty engaging in service activities, especially those involving community engagement aligned with our school's <u>Strategic Plan for Antiracism</u>. In addition, institutional funding to support this work also exists. Our flagship unit for engagement at the University is the <u>Office of Public</u> <u>Engagement</u> (OPE) which implements the University's <u>Action Plan for Public Engagement</u>.

OPE initiatives include the Engagement Academy for University Leaders, an award-winning professional development program for leaders committed to enhancing the value and performance of their institutions by deepening collaborative relationships with their communities through the complex process of organizational change. OPE also hosts a monthly <u>Critical Community Engagement Roundtable</u>, offering faculty challenging discussion, peer support and a safe place to test new ideas. Community service opportunities can also be found through their <u>Martin Luther King, Jr., Community Service Pledge Drive</u>. Another outstanding source of financial support for faculty extramural engagement is the UMN <u>Center for Global Health and Social Responsibility</u> (CGHSR).

3) Describe and provide three to five examples of faculty extramural service activities and how faculty integrate service experiences into their instruction of students. (self-study document)

Example 1: Partnership with the St. Paul Public Schools.

As one example of an OPE-funded initiative in SPH, the Division of Biostatistics has an outreach and engagement committee to brainstorm ideas for engaging with the broader community outside the University. They applied to the UMN Engaged Department grant program and began an initiative with the St. Paul Public Schools (led by Marta Shore and Anne Eaton in Biostatistics with Matt Simcik in Environmental Health Sciences). Biostatistics graduate students and faculty partner with St. Paul Public Schools teachers to develop a new curriculum for a "human sustainability" unit based on environmental pollution metrics that will expose St. Paul Public Schools high school students to the fields of biostatistics, environmental health sciences, and public health in general. The data source for the curriculum is available in an app they have designed to show students historical pollution monitoring data. The <u>St. Paul Public School system</u> has 79% students of color, 65% students in the reduced price/free lunch program, and 47% students for whom English is a second language. The team also employed a local Somali young woman, a high school student, for a 2021 summer internship through Girls Inc. to participate in this work. She received hands-on experience in data and statistical programming, engaging with stakeholders, and opportunities to learn about various careers in public health, and her feedback will help us create a permanent internship program with SPPS.

Example 2. Partnership with the Minnesota Department of Health modeling the spread and impact of COVID-19 in the state.

Drs. Shalini Kulasingam, Kelly Searle, and Kumi Smith have been working since the pandemic's onset with the <u>Minnesota Department of Health</u> (MDH) as epidemiology consultants modeling the spread and impact of COVID-19 in the state. In this capacity, they work to create mathematical models, using available evidence on the virus combined with Minnesota-specific data to understand how the epidemic will play out in the state. The models provide policy-makers, businesses, health care providers, and public health officials information to help make decisions to reduce the impact of the disease, including the state's executive orders. The modeling work, which they have made fully transparent to the public (i.e.: releasing code) has provided the necessary details to better inform the public of what information contributes to decision-making, and to explain why guidance like social distancing is critical to protect the health of Minnesotans. Drs. Kulasingam, Searle and Smith actively engage SPH students in their collaborative projects with the MDH. Many MPH students worked on the modeling project directly. The public health pandemic experience and these collaborations with MDH have been brought into the classroom and curriculum through case studies, data sets, and applied practice experiences.

Example 3. Partnership with organizations focused on American Indian and Alaska Native health. Professor Linda Frizell has been honored to be a tribal technical advisor for health care and services policy and legislation for over 24 years; she was also recently re-appointed by the U.S. Secretary of Health and Human Services to the Advisory Committee on Minority Health. She serves on expert panels for numerous legislative proposals and policy administration. Dr. Frizzell is a member of the International Suicide Prevention work group for American Indians and Alaska Natives (Canada-USA); member of the National Medicare and Medicaid Policy Committee, chair of the Behavioral Health Sub-Committee; Government Affairs Committee, National Rural Health Association; and past chair of the State of Minnesota Minority and Multicultural Health Advisory Council. Professor Frizzell developed the SPH graduate minor in American Indian Health and Wellness, which is the first in the nation. All six of the classes that she developed and teaches for this minor specifically use a pedagogical framework of service learning. During "open discussion" opportunities, Dr. Frizzell guides the discussion to complement issues the students' bring to the class from their own communities, and she challenges them to come up with examples of how they can use their knowledge to be of service to their communities. Dr. Frizzell brings her experience of current primary "cutting edge" knowledge from the federal government into the classroom.

4) Describe and provide three to five examples of student opportunities for involvement in faculty extramural service. (self-study document)

Example 1. Partnership with the City of Minneapolis

Professor Melissa Laska partners with the City of Minneapolis to improve the availability of healthy foods offered in food stores such as food-gas marts and convenience stores. Her policy advocacy, and that of her MPH students who participated in this project, helped to pass the Staple Food Ordinance making Minneapolis the first city in the nation to make selling high-quality, nutritious foods and fresh produce a requirement for such stores. Recently the Minneapolis City Council revised the ordinance to make it easier for retailers to comply with the policy and updated it for retailers who serve different cultural communities.

Example 2. Partnership with the Minneapolis Health Department

Professor Sonya Brady and Professor Rhonda Jones-Webb have partnered with local community stakeholders, including members of the Violence Prevention Steering Committee in the Minneapolis Health Department's Office of Violence Prevention, police officers, and young Black men to collect information that will inform how to best engage with communities to mobilize and prevent future violent encounters between police and young Black men in Minneapolis. MPH students to work on this project. The work provides students the opportunity to engage with numerous community organizations and develop advocacy skills.

Example 3. Partnership with the Minnesota Diverse Elders Coalition

A community forum was convened in November 2019 in a partnership between the Minnesota Diverse Elders Coalition and <u>Professor Tetyana Shippee</u>. It was attended by members of multiple communities affected by disparities in long-term care quality for older adults. Hispanic and Latino, Somali, Native American, and African-American communities were in the audience, as well as care providers from nonprofit and other organizations. Professional translators simultaneously shared the presentation in Spanish and Somali. The program included a panel presentation in which PhD student Odichinma Akosionu provided an update to the community partners on relevant research.

Example 4. Partnership with Saint Paul Public Schools

As mentioned above, the Divisions of Biostatistics and Environmental Health Sciences, supported by the UMN Engaged Department grant program, has an initiative with the St. Paul Public Schools. Biostatistics graduate students and faculty partner with St. Paul Public Schools teachers to develop a new curriculum based on environmental pollution metrics and research. This curriculum introduces St. Paul public high school students to the fields of biostatistics, environmental health sciences, and public health in general.

5) Select at least three of the following indicators that are meaningful to the school or program and relate to service. Describe the school or program's approach and progress over the last three years for each of the chosen indicators. In addition to at least three from the list that follows, the school or program may add indicators that are significant to its own mission and context. Schools should focus data and descriptions on faculty associated with the school's public health degree programs.

Indicator 1. Percent of total faculty participating in extramural service activities

Based on data from annual performance evaluations and faculty CVs and websites, we know that nearly all SPH faculty participate in extramural service each year: 100% in 2018-2019, 99% in 2019-2020, and 98% in 2020-2021. Single year dips below 100% are likely due to developmental leaves such as sabbaticals, parental leaves, and incomplete data collection.

Indicator 2. Number of community-based service projects

A faculty survey from February 2021 collected data for this metric for the years 2019 – 2020 and 2020 – 2021 (2018-2019 was not included in the survey; we felt that responses to questions about 2018 – 2019 would be too susceptible to recall bias.) Of 134 faculty, 95 responded (71% response rate), and of those, more than half demonstrated substantial community involvement.

- 2019-2020: Faculty reported 143 total projects, in 58 of which (45%) one or more students were involved. These projects were reported by 49 of the 95 faculty respondents (52%).
- 2020-2021: Faculty reported 195 total projects, in 64 of which (33%) one or more students were involved. These projects were reported by 52of the 95 faculty respondents (55%).

Indicator 3. Public/private or cross-sector partnerships for engagement and service

Partnerships with public-facing organizations, with organizations in our social systems, and with practicing public health professionals are critical for keeping us current with public health related issues and for increasing our impact on improving the health and wellbeing of the public. Partnerships built on shared commitment and focus, envisioned and developed together, have the best chance of successful implementation and long-term impact. Below we provide examples from information collected in 2020 – 2021.

• Example 1. Minnesota Learning Health System Mentored Career Development Program (MN-LHS)

This collaboration includes University of Minnesota, M Health Fairview, Mayo Clinic, Hennepin Healthcare, and six other collaborating clinical sites. Dr. Timothy Beebe is Co-Director of the MN-LHS, a K12 scholar training program that trains researchers embedded within health systems to systematically generate, apply, and translate evidence quickly to improve personalization, quality, equity, and outcomes of care and reduce waste in the healthcare system. A current scholar, Dr. Warren McKinney, is embedded at <u>Hennepin Healthcare</u>, a comprehensive public hospital and clinic system in Hennepin County, Minnesota. Dr. McKinney's research focuses on creating culturally sensitive resources to support African-American kidney transplant candidates. While there, he will develop patient-centered resources to improve patient education and consultation on the newly available Hepatitis C positive deceased donor option at the Hennepin Healthcare Kidney Transplant Program.

• Example 2. Minnesota Department of Corrections

In 2020 Dr. Ruby Nguyen partnered with the Minnesota Department of Corrections to create two 1-credit distance education courses that served as an introduction to public health and epidemiology. Incarcerated students, and some in other residential programs (i.e., workhouses), learned the principles and current day challenges to our field, thus increasing their understanding of public health but possibly also opening the door to a future career in the field. Although inperson education is the goal for the prison's open university concept, the pandemic has made that impossible. Dr. Nguyen serves on the University of Minnesota's College in Prison Advisory Panel, which is implementing a plan by the Department of Corrections to offer a bachelor's degree in Liberal Arts to incarcerated students.

• Example 3. Center for Infectious Disease Research and Policy (CIDRAP)

The <u>Center for Infectious Disease Research and Policy</u> (CIDRAP), directed by Dr. Michael Osterholm, works to prevent illness and death from targeted infectious disease threats through the translation of scientific information into real-world, practical applications, policies, and solutions. This work includes interdisciplinary partnerships and consensus building: convening experts, including policymakers, business leaders, and the medical and public health communities, to assess problems, analyze available information, and develop effective public policy recommendations and guidance. We prioritize communication in order to make current information widely available to educate and inform healthcare providers, public health professionals, business leaders, students, opinion leaders, policymakers, the media, and others

across the nation and around the world. CIDRAP has been a critical source of authoritative information during the <u>COVID-19</u> pandemic while not losing sight of other important infectious disease areas such as Ebola, sexually transmitted infections, and antibiotic use and stewardship. An example of CIDRAP's reach in relation to its COVID-19 media reach is noted in its web stats for 2020, which can be viewed in its <u>2020 Annual Webmetrics Report</u>. They had a total of 38,334,502 page views (up 1,422.4% from last year's total of 2,517,964), a total of 22,742,711 users (up 1,583.2% from last year's total of 1,351,181), and coverage in the Top 10 foreign countries were: Canada, UK, India, Poland, Australia, Germany, Philippines, Italy, Turkey, and France.

• Example 4. Exposure Science and Sustainability Institute (ESSI)

The Exposure Science and Sustainability Institute (ESSI), directed by Dr. Susan Arnold, offers services in industrial hygiene exposure and risk assessment. ESSI designs and conducts studies on-site for the partner industry focusing on predicting, assessing, and reducing occupational exposures to chemicals, and on predicting and assessing chemical exposures that may occur as a result of consumer products use. In addition to local industry, community groups often need to quantify exposures to contaminants present in their communities to understand their health risks and determine the need for and extent of remediation. ESSI also conducts training for practicing industrial hygiene and environmental health sciences professionals.

6) Describe the role of service in decisions about faculty advancement.

The <u>Board of Regents Policy on Faculty Tenure</u> states, "This determination [for awarding indefinite tenure] is reached through a qualitative evaluation of the candidate's record of scholarly research or other creative work, teaching, and service.... All faculty members are expected to engage in service activities," where service includes professional and institutional (Board of Regents Policy on Faculty Tenure, section 7.11). Faculty performance review must take into account "contributions to the service and outreach functions" of our school (section 7.7a). In addition, "Interdisciplinary work, public engagement, international activities and initiatives, attention to questions of diversity, technology transfer, and other special kinds of professional activity by the candidate should be considered when applicable" (section 7.11) when considering promotions.

These themes are further reinforced in our school's <u>Appointment, Promotion, and Tenure Policy</u> (for tenure-track/tenured faculty), which states that for appointment and promotion: "...service activities related to the candidate's field or discipline, involvement in community partnerships/collaborations aimed at improving public health, and advancing diversity, equity, and inclusion...are all strongly valued." Our policy provides examples of valued engagement activities, such as service or technical assistance to governmental organizations including tribal governments; board membership or advisory roles for groups engaged in the work of equity; participation in programs that create pathways for underrepresented groups to pursue higher education; engagement of communities through public speaking and media; and others (Section IV.B.1.h(2)). Professional service activities that are particularly valued and stated in policies are roles in professional organizations, editorial boards, and advisory boards. Other service examples include serving as a grant reviewer, a manuscript reviewer, and a peer evaluator of other dissemination types. Faculty may also engage in professional practice activities within the context of service (Section IV.B.1.h(2)).

We take pride in the way our promotion policy has recently been revised and approved by the Provost (July 2021) to include such inclusive language on engagement activities and activities that advance diversity, equity, and inclusion. *This marks important progress on one of the action items in our* <u>Strategic Plan for Antiracism</u> (Goal 4 in Area 3: Faculty, first action item, p.16) and brings the policy in line with our values. Our school's <u>Appointment and Promotion Policy</u> (for contract faculty) will be up for revision soon and is likely to incorporate similar language; it currently emphasizes the significance of service, especially that aimed at improving public health, but does not provide such a broad interpretation of service.

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

Strengths

We have substantial strengths in this area, and are likely to only become stronger due to SPH's commitment to antiracism through our Strategic Plan for Antiracism. The value and impact of community engaged service can potentially be magnified through research and teaching. Community engaged research and community engaged teaching often begin from or are inspired by community-based service engagement.

Weaknesses

• We have no explicit funding mechanism for the substantial time that faculty *and their community partners* must devote to developing service engagement into a potentially impactful research or teaching opportunity.

F1. Community Involvement in School Evaluation and Assessment

The school engages constituents, including community stakeholders, alumni, employers and other relevant community partners. Stakeholders may include professionals in sectors other than health (eg, attorneys, architects, parks and recreation personnel).

Specifically, the school ensures that constituents provide regular feedback on its student outcomes, curriculum and overall planning processes, including the self-study process.

1) Describe any formal structures for constituent input (eg, community advisory board, alumni association, etc.). List members and/or officers as applicable, with their credentials and professional affiliations.

We rely on two central formal structures for constituent input: the SPH Campaign Cabinet https://www.sph.umn.edu/give/campaign-for-sph/campaign-leadership/, and the SPH Alumni Board https://www.sph.umn.edu/give/campaign-for-sph/campaign-leadership/, and the SPH Alumni Board https://www.sph.umn.edu/give/campaign-for-sph/campaign-leadership/, and the SPH Alumni Board https://www.sph.umn.edu/give/campaign-for-sph/campaign-leadership/, and the SPH Alumni Board https://www.sph.umn.edu/alumni/sph-alumni-society/sph-alumni-board/. Additionally, input comes from advisory boards to specific academic programs, centers, training grants and *ad hoc* advisory groups specific to events and projects.

In 2017, SPH established our Campaign Council to coordinate as well as provide leadership, energy, and visibility for the school's *Driven: Shaping a Future of Health Campaign*. Campaign priorities are as follows:

- **Research and Partnerships:** Provide the knowledge that health departments, communities, and policymakers need to make the best decisions about population health.
- **Student Success:** Attract top talent and provide the rigorous academic experience needed by future leaders to tackle the world's most pressing health challenges.
- World-Class Faculty: Develop leaders in research and education to shape critical priority areas.

The **SPH Campaign Council** includes representation from SPH faculty, staff, and alumni, U of M faculty outside of SPH, non-governmental organizations, industry, foundations, and local government. See the list below.

- Diane Berthel, retired institutional investment consultant and global human rights and health care volunteer
- Paurvi Bhatt, MA, President, the Medtronic Foundation; specializes in global health and community wellbeing
- Sarah Bjorkman, director of communications, SPH
- Imee Cambronero, MPH '09 3M Gives Social Impact Supervisor, 3M
- John Finnegan, PhD, SPH dean emeritus and professor
- John Frobenius, MHA '69, Regent Emeritus, retired hospital administrator and health system executive, CentraCare, St Cloud, MN, serving rural central Minnesota
- Julia Halberg, M.D., MPH '83, retired General Mills global health and chief wellness officer
- Joseph Koopmeiners, PhD, MS '04, professor and biostatistics division head, SPH
- Jessica Kowal, chief development officer, SPH
- Gretchen Musicant, MPH '86, Commissioner, Minneapolis Health Department
- Brian Osberg, chair, MPH '86, retired health care executive and former Minnesota state Medicaid director
- Michael Osterholm, MS '76, MPH '78, PhD '80, Regents professor, SPH
- James Rice, MHA '71, PhD '91, managing director & senior advisor, governance and leadership, Gallagher Integrated, Minneapolis
- Teresa Sit, F. D.D.S., adjunct faculty school of dentistry, U of M
- Beth Virnig, MPH '89, PhD '93, professor, SPH
- Don Wegmiller, MHA '62, chairman & co-founder of C-Suite Resources

When the campaign concludes at the end of 2021, the council will evolve, with guidance from the incoming dean.

The School of Public Health Alumni Society serves alumni and students, promotes excellence in programs, and advances public health efforts in our community and beyond. The society's first elected board of directors convened in September 1983.

The Alumni Board fosters connections among alumni, faculty, and students. The board's goals include:

- 1. **Connect**: Create opportunities for meaningful connections between alumni, faculty/staff, students and professional partners.
- 2. **Develop**: Foster a community of engaged alumni and students.
- 3. **Recognize**: Acknowledge and honor the achievements of SPH alumni and students.
- 4. **Collaborate**: Work together to make a positive impact in public health to advance the SPH brand and the value of a public health degree.

The Alumni Board has three standing committees:

1. Engagement Committee

The engagement committee oversees alumni and volunteer engagement, including planning alumni events such as Eat Learn Gather, Healthy Spirits, and the Alumni Welcome Picnic. The committee provides opportunities for alumni to volunteer for and with the school.

2. Mentoring Committee

The mentoring committee supports the school's annual mentor program by helping with recruitment of mentors and the matching process, as well as by providing additional content and support for the program's participants. Volunteers on this committee also work on programming that connects alumni and students, especially for virtual opportunities.

3. Scholarship & Awards Committee

The scholarship committee supports the SPH alumni awards and SPH alumni scholarship, and selects recipients for these annual awards. The committee also seeks to increase donations to the SPH alumni scholarship in order to support students as they work toward their MPH, MHA, MS or PhD degree or certificate from the School of Public Health.

- Liesl Miller Hargens, president, MPH '07, Boston Scientific, senior director of health economics
- Edwin Wortham, vice president, MHA '15, Sutter Health, senior service designer
- Karen Wick, past president, RPh, MPH '94, Stephan Research, clinical research consultant for pharmaceutical and medical device fields
- Maria Bitanga, secretary, MPH '16, Allina Health, Performance Improvement Advisor
- Susan Leppke, treasurer, MPH '07, AABB, public policy advisor
- Sonja Asuen, MPH '17
- Alicen Burns Spaulding, PhD '13, senior advisor and team lead, national Institute of Allergy and Infectious Diseases Vaccine Research Center
- Barbara Greene, MPH '85, Barbara Greene & Associates, senior consultant
- Senka Hadzic, MPH '08, , Stratis Health, Program Manager
- Jessican Kinowski, MPH '06, Cigna HealthSpring, clinical program director
- Kim McCoy, MS '07, MPH '97, Stratis Health, senior program manager
- Deb Moses, MPH '90, Temple Isaiah, executive director
- Monica Palese, MPH '15
- Rebecca Sales, MPH '15, Wilder Research, research associate
- Deborah Caselton Trahan, MPH '09, Mayo Clinic, pediatric nurse practitioner
- Raymond Thron, PhD '75, MS '71, Laureate Education, professor
- Ania Urban, PhD '12, MPH '09, Cardno ChemRisk, senior supervising health scientist
- Stephen Waldhoff, MHA '76, Mayo Clinic, Emeritus chief administrative officer
- Heather Weinreich, MPH '05, University of Illinois at Chicago, assistant professor
- Lori Wukawitz, MHA '19, Boston Scientific, senior manager, health economics and market access

Other formal structures for constituent input include advisory boards to specific academic programs, centers, and training grants, as well as *ad hoc* advisory groups formed for specific events and projects. Examples of such boards, centers, and groups include the Industrial Hygiene Program Advisory Board, Toxicology Advisory Board, Public Health Administration and Policy Community Advisory Board, Midwest Center for Occupational Health and Safety (MCOHS) External Advisory Board, Occupational Injury Prevention Advisory Board, Midwest Consortium External Advisory Board, Upper Midwest Agricultural Safety and Health Center (UMASH), Center for Leadership Education in Maternal and Child Public Health (MCH), Food for Health Event Advisory Board, SPH Healthy Futures Summit & 75th Anniversary Gala Advising Group, and Healthcare Leadership Symposium Advising Group. These advisory groups typically include representation from alumni, practitioners, community partners, and non-governmental agencies, and also include employers and government agencies.

In addition, the Center for Healthy Aging and Innovation (CHAI) hosts the CHAI Aging Assembly (one or two meetings per year) as an opportunity receive community feedback on policy, programs, and services.

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.

SPH engages external constituents through several mechanisms.

 Advisory Groups: SPH's two central advisory groups meet regularly to provide input on strategies to advance their respective goals, which include support of student success. Advisory groups for specific academic programs, centers, and training grants meet regularly to provide input on educational, training, and workforce needs.

For example, the Division of Environmental Health Sciences has an advisory group that advises division courses that address topics in toxicology and environmental health risk assessment. This advisory group had recommended that content on the emerging applications of *adverse outcome pathways (AOPs)* be incorporated into the coursework. The toxicology faculty created and launched a successful course on this topic. At a recent meeting of the toxicology advisory group, the toxicology faculty consulted with committee members about the following issues: revising the curriculum to incorporate the AOP content into another course, emerging content the advisory group thinks should be added to the curriculum, and interest in developing a certificate in toxicology. Please see the Electronic Resource File, Criterion F folder, F1.2 subfolder for documentation of the most recent meeting.

Public health administration and policy is another example of a program that routinely uses a community advisory board comprised of public health organization/agency leaders in Minnesota who commonly employ our graduates. This group meets twice per year to solicit advice about what graduates of our PHAP program need to know in order to be successful in the workforce; PHAP program leaders take this advice seriously and implement what they learn. For example, several workforce leaders told us in spring 2019 that they thought students should learn more about community engagement techniques, thus we incorporated that into our leadership class, PubH 6727. Similarly in 2015, they told us that graduates needed more project management skills and we developed a project management class and incorporated content into our required core management class. Please see the Electronic Resource File, Criterion F folder, F1.2 subfolder for an example meeting agenda. A third example of advisory board input can also be found in the Criterion F folder of the ERF.

- **Preceptors**: Preceptors for each Applied Practice Experience evaluate student competencies during their Applied Practice Experience and the products developed by students for the site as part of their applied experience. The preceptors also comment on the student's strengths as well as areas for improvement, including technical competence and professional practice.
- **Guest lecturer and instructors**: SPH has strong partnerships in the practice community including the Minnesota Department of Health. By incorporating community members and

practitioners, including our affiliate faculty, as guest lecturers in SPH courses, we ensure that the topics most relevant to current practice and future direction are incorporated into our curriculum. Community members, practitioners, and affiliate faculty also develop and teach courses in the Public Health Institute

- Surveys and Focus Groups: As described in detail below in section 3.d Assessment of school graduates' ability to perform competencies in an employment setting, we also conduct surveys of SPH alumni, in addition to focus groups of alumni and employers, to engage external constituents in the assessment of SPH education, including curricular effectiveness and preparation for employment.
- 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

Our current vision, mission, values, goals, and evaluation measures evolved from focus groups convened to develop SPH branding. The focus groups, which met between November and December 2015, represented six of the school's key stakeholder groups: students, faculty, staff, alumni, community partners, and University of Minnesota Affiliates. These groups helped to illuminate what matters to internal and external stakeholders.

In 2020, SPH Guiding Statements were refined and reconfirmed through a process that solicited broad input from faculty, staff, students, alumni, and external partners during a school-wide review process (outlined below). That process took place September through November and was overseen by the accreditation coordinating team led by the associate dean for education. Notably, although we refined some of the text accompanying our values, our mission and values remained unchanged as a result of this process, reflecting not only the solidity of these core values, but also the effectiveness of the branding process through which they were articulated. This process also saw the redevelopment of the school's vision and goals which then guided the development of evaluation measures.

This development process involved the following steps:

- 1. Dean Finnegan (retired 1/31/22) drafted a statement of vision, mission, values & goals
- 2. The re-accreditation team reviewed the draft and provided input
- 3. A faculty work group provided input
- 4. Alumni focus groups provided input
- 5. The entire SPH community was surveyed*
- 6. The statement of vision, mission, values & goals was published on the <u>SPH website</u>, with contact information for feedback
- 7. The re-accreditation team reviewed and incorporated feedback
- 8. Dean Finnegan reviewed and approved the final draft

*The survey was sent to 2,101 members of the SPH community, including students, staff, and faculty. Surveyed faculty included adjunct instructors, who are external partners as they hold positions outside of SPH and also outside of the University of Minnesota.

b. Development of the self-study document

- Faculty, staff, students, alumni and external partners played a key role in the development of the statement of vision, mission, values, and goals.
- We created a re-accreditation website with contact information for feedback and a timeline for developing the self-study document. We promoted that site to the SPH community as well as to external partners.

• We invited members of our employer and alumni focus groups to review individual draft sections of the self-study, made available through shared electronic folders. We encouraged participants to provide feedback through a survey form.

c. Assessment of changing practice and research needs

Our advisory groups serve as the major artery through which external partners contribute to the assessment of changing practice and research needs. Advisory groups for specific academic programs and centers include the following: Industrial Hygiene Program Advisory Board, Toxicology Advisory Board, Public Health Administration and Policy Community Advisory Board, Midwest Center for Occupational Health and Safety (MCOHS) External Advisory Board, Occupational Injury Prevention Advisory Board, Midwest Consortium External Advisory Board, Upper Midwest Agricultural Safety and Health Center (UMASH), Center for Leadership Education in Maternal and Child Public Health (MCH) Advisory Board. These advisory boards all include external partners (employers, community members, representatives from government agencies, non-governmental organizations, and alumni).

In addition to advisory groups, one of the major priorities of the SPH Campaign Council is *Research and Partnerships: Provide the knowledge that health departments, communities, and policymakers need to make the best decisions about population health.* The Campaign Council is instrumental in discussions of emerging trends in research. For example, the SPH campaign identified diversity, equity, and inclusion as a funding priority. Accordingly, Blue Cross and Blue Shield of Minnesota made a generous gift of \$5 million to support SPH in formally launching and sustaining a new center focused on racial health disparities and improved public health. This flexible source of funding will help sustain pilot-grant funding, faculty research, center leadership, and other operational, staffing, and research expenses needed to advance the formation of the <u>Center for Antiracism Research for Health Equity</u>.

d. Assessment of school graduates' ability to perform competencies in an employment setting

- In spring 2021, SPH sent a career trends survey to all SPH alumni who had graduated 12 or more months prior (approximately 10,000 alumni); two thousand alumni responded. The career trends survey addresses several areas, including perceptions of their student education. Alumni are asked to rate their perceptions about the general and programspecific competencies from their degrees. We learned that over 80% of the respondents agree/strongly agree that they achieved the competencies through their SPH education with evidence-based approaches to public health being our strongest competency recalled, and policy in public health being our weakest and where we need to consider devoting more effort in our curriculum. The career trends survey will be sent out every five years. Our March 2021 focus groups of alumni again recalled evidence-based approaches to public health as the competency that came through as the strongest, and that communication, leadership, and policy are areas we need to strengthen. One notable focus group theme was that although the alumni felt that their education provided necessary skills and was well rounded, their coursework was more grounded in the ideal than in the complexities and uncertainties of the issues they needed to address in the workplace. The MPH alumni found the Applied Practice and Integrative Learning Experience to be particularly useful for entry into the workforce.
- In Fall 2017, 2018, and 2019, the Graduate School sent out a survey to PhD alumni who were three, eight, and 15 years out from receiving their degree that asked how well their doctoral education from the University of Minnesota prepared them for their job. The

response rate ranged between 20-30%, depending on the year. Approximately 91% of SPH PhD alumni who responded to the survey reported that their doctoral education prepared them well, very well, or extremely well. Data from this survey can be found in the Electronic Resource File, Criterion F folder, F1.3 subfolder). The Graduate School has since discontinued this survey. Instead, in summer and fall 2021, the Graduate School sent out a different survey to doctoral students who had graduated between 2009 and 2019 asking them to characterize their current employment. This data is also found in the Electronic Resource File, Criterion F folder, F1.3 subfolder.

- The Midwest Center for Occupational Health and Safety (MCOHS) surveyed their alumni on their perceived proficiencies in competency in the areas of recognition, evaluation, control communication, behavior, and management. MCOHS trains MPH, MS, and PhD students in emphasis areas housed in the Division of Environmental Health Sciences. These data can be found on page 10 of the final performance report, which is included in the Electronic Resource File, Criterion F folder, F1.3 subfolder.
- Employer focus groups were asked to assess how well prepared SPH graduates are for work in their organization. Questions for the focus groups focused on employer perception of the competency areas they felt SPH graduates were best and least prepared in, and asked for additional feedback on other skills and knowledge SPH graduates have either excelled in or have not been as well prepared for. The Career & Professional Development Center is currently developing plans to make annual data collection a routine part of their work plans. This outreach may be both quantitative and qualitative in nature, continually assessing the employer perspective of our graduates. Plans involve communicating findings to SPH leaders for the purposes of ongoing quality improvement. The goal is to communicate with a minimum 10 employer partners each year.
- Informal Assessment:
 - Through its daily operations, the Career & Professional Development Center regularly receives verbal and/or written feedback from employers regarding their recruiting needs (i.e., skills, programs, backgrounds, etc.) as well as on the level of preparedness of SPH student and alumni applicants. The center uses this qualitative data to strengthen its industry partnerships while improving the overall quality of services that specifically address preparedness of SPH students.
 - The Community Advisory Board for Public Health Administration and Policy (PHAP) is asked whether SPH PHAP graduates can do what employers need them to do when they graduate. PHAP uses this feedback to modify their curriculum.

4) Provide documentation (e.g., minutes, notes, committee reports, etc.) of external contribution in at least two of the areas noted in documentation request 3.

Documentation can be found in the Electronic Resource File, Criterion F folder, within the F1.4 subfolder to provide support for our work with external contributors on the following:

- Re-evaluation of the SPH vision, mission, values, goals and evaluation measures
 - Electronic Resource File, Section B folder, "MissionVisionValues" Focus Group Notes, two documents
 - Assessment of school graduates' ability to perform competencies in an employment setting Career Trends Survey data
 - Employer Focus Group notes

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

Strengths

- Several channels allow external partners to contribute to the ongoing operations of the school. Advisory groups for specific programs and centers are particularly effective for giving input on education, training, workforce needs, and research directions.
- Two new alumni surveys, one from SPH and one from the graduate school, provide crucial data for assessing the graduates' ability to perform competencies in an employment setting.
- Our alumni, who represent a wide range of community partners and public health practitioners, are very active and enthusiastic participants in the ongoing operations of SPH.

Weaknesses

 While advisory groups effectively provide input on education, training, and workforce needs in specific areas, a major challenge is developing a central structure for providing external partner input on broader areas of education and training. A formal "board of visitors" composed of state, national and international experts with public health vision and experience may be explored in the coming years to address emerging and rapidly changing public health challenges especially in the most critical areas. There is a need for schools of public health to both respond more nimbly to rapid if not radical change, but also to look beyond the "event horizon" to consider new emerging challenges before they become critical.

F2. Student Involvement in Community and Professional Service

Community and professional service opportunities, in addition to those used to satisfy Criterion D4, are available to all students. Experiences should help students to gain an understanding of the contexts in which public health work is performed outside of an academic setting and the importance of learning and contributing to professional advancement in the field.

1) Describe how students are introduced to service, community engagement and professional development activities and how they are encouraged to participate.

The SPH website is usually where prospective students first encounter the School's focus on service, community engagement, and professional development. Those who matriculate formally explore activities during the School's annual orientation week in August. Specifically, the resource fair on orientation day showcases many opportunities available through various organizations and student groups. The SPH mentor program also conducts a session at orientation, as well as follow-up workshops encouraging current students to connect with SPH alumni and to pursue the benefits of mentorship. Also, during orientation the Career & Professional Development Center hosts a session encouraging students to use the center's services—and follow-up workshops throughout the academic year cover wide-ranging topics such as: personal career advising, networking, informational interviews, professional conferences, and relationship development with faculty members for RA/GA positions. These sessions, in addition to program-specific opportunities discussed in this section, set the foundation for the importance of service, community engagement, and professional development throughout one's academic career.

Our weekly email newsletter, SPHere, regularly promotes opportunities announced by faculty and education program coordinators. Faculty often invite community leaders to present during class, and the SPH Student Senate (along with certain other programs) offers scholarships for students to attend national conferences. Below, we list a few more examples of partnerships and strategies for engaging students in service, community engagement, and professional development.

Center for Health Interprofessional Programs (CHIP) Partnership

The Center for Health Interprofessional Programs (CHIP) has an interdisciplinary focus on service and professional development; two SPH students serve on the CHIP executive council. CHIP events and experiences are promoted to all health sciences students through their monthly newsletter and cross-promotional efforts within SPH:

- An annual Health Professional Leadership Conference helps students better understand their leadership role as future health professionals. The conference allows students to build relationships with students across professions, and to explore the diverse perspectives on leadership in healthcare. SPH students gain professional development experience through helping plan and present at this conference.
- Volunteer opportunities allow students to interact with nonprofit organizations such as Open Arms (assembling meals) or Give Kids a Smile (educating low-income families on public health issues).
- At the annual CLARION student case competition for health professional students, student teams
 of four (including at least two disciplines) receive a case for which they create a root cause
 analysis. Teams present their analyses to interprofessional judges who evaluate them in the
 context of real-world standards of practice.

Community Engagement Agreement and Online Database

Since many students in the School of Public Health volunteer in the community, we offer a zero-credit course, PubH 0020, to support their efforts. All students registered for PubH 0020 (with approval from their advisor) are eligible for University-sponsored liability insurance. While students' transcripts do reflect registration for PubH 0020, the course has (in addition to zero credits) no tuition, fees, or grades. Note that a zero-credit registration for community engagement does not serve as substitute for a required course or field experience.

Prior to registration, students must complete the Community Engagement Agreement available online, through which they describe the intended experience. The agreement must be approved by the student's advisor.

To complete the Community Engagement Agreement a student must provide the following information:

- Name of the organization
- Address
- Organization phone number
- Supervisor within the organization
- Description of the activity
- Description of how this activity relates to their development as a public health professional
- Semester and date of experience
- Electronic signature of academic advisor

Upon approval of the agreement, a student receives an email and registration permission number.

Summer of EngageMNt

In summer 2020, the University of Minnesota initiated <u>Summer of EnageMNt</u>. This new program supports undergraduate and graduate students from across the University system in actively responding to the present and emerging needs of Minnesota communities.

Summer of EngageMNt matches students with community partners to address a broad range of societal issues. Students can volunteer for a few hours or engage in a longer-term experience. The Summer of EngageMNt is coordinated by the Office for Public Engagement (OPE), in collaboration with the Center for Community-Engaged Learning (CCEL) and the University COVID Action Network (U-CAN). Students participate in activities such as data analysis, GIS mapping, graphic design, background research, phone campaigns, social media, online tutoring/mentoring, senior outreach (cards, phone calls, etc.), journalism/story-telling, and business planning, among others.

Community Health Initiative (CHI)

Community Health Initiative (CHI) focuses directly on communities facing public health disparities and other socio-economic issues. This unique project results directly from a partnership between Medica and the University of Minnesota's Office for Business & Community Economic Development, which is committed to advancing the quality of life for Minnesota communities. CHI's goal is twofold: 1) to support community-based nonprofit organizations and small businesses that work in the areas impacting public health, social services, medicine, and medical technology, or to help these organizations and businesses build capacity and improve their overall performance and effectiveness in communities of color, and 2) to provide UMN students with applied learning experiences in communities that face public health disparities and other socio-economic issues.

- **CHI Student Consulting Projects** offer experiential learning opportunities to all UMN graduate and professional students. Students work on specific projects identified by local nonprofit organizations or businesses committed to addressing public health issues in underserved communities. These projects attempt to solve an operational business need of the organization and/or address a health disparity in the community. One or more students are assigned to a project (depending on project scope and type), with each student contributing 60-80 semester hours. Consulting projects are held during the fall and spring semesters, and students receive a consulting payment upon completion.
- **CHI Community Internships** assist nonprofits and businesses that directly address public health issues or health disparities in underserved communities facing social and economic challenges. Participants in community internships are full-time graduate students enrolled in the School of Public Health, School of Social Work or Medical School. Internships are offered in the summer and can be part-time, ³/₄-, or full-time positions. Proposals may cover topical areas of public health, community health education, social work, population health coordination, nursing

care/management, health/medical research, feasibility study, program evaluation and measurement, program development and community outreach. Students receive a bi-weekly hourly wage and may use these internships to fulfill field and applied learning experience degree requirements.

Over the past three academic years, CHI has engaged 112 students for semester-long consulting projects, and 98 of those students studied in the School of Public Health. For summer internships, CHI has engaged 69 students, 58 of whom studied in the School of Public Health.

Medical Reserve Corps (MRC)

The University of Minnesota Medical Reserve Corps (MRC) program is part of a national initiative to mobilize and coordinate local volunteers to assist in the event of a public health crisis or large-scale disaster. The MRC program provides a structure to pre-identify, train, credential, and organize medical and public health professionals, as well as non-clinical personnel to supplement and support health emergency response systems.

Any UMN student, faculty, or staff member in the health sciences, Boynton Health, or mental health professional in student counseling services is welcome to join the program. Participants may be clinically licensed or not, as long as they have a strong interest in assisting in the response efforts during a health-related emergency. Before their first shift, all new members receive orientation, extensive training in HIPAA, bloodborne pathogens OSHA requirements, personal protective equipment, and a handbook.

Most recently, COVID-19 presented a unique opportunity for SPH students to participate in MRC. The table below illustrates the hands-on experiences of SPH students during a once-in-a-lifetime global pandemic.

Deployment	# SPH Students	
Contact Tracing/Contact Investigations: deployed via Minnesota Department of Health and Boynton Health	33	
Command Center Support: MHA students assisted MHealth-Fairview with Command Center support operations: March & April 2020	23	
COVID-19 Testing: Ramsey County Public Health testing of Community Organizers	4	
Large Scale Campus COVID-19 Saliva Testing Event	5	
Boynton COVID-19 Testing Site: Greet clients and direct to testing area	3	

Division Level Opportunities

Biostatistics

Students enrolled in biostatistics can engage in student-organized seminars where they present their research to and receive feedback from one another in the absence of faculty members. Students learn of this opportunity during the program component of new student orientation, and they receive an email from the co-leaders of the seminars who personally invite them to participate.

Biostatistics has an outreach committee that presents to students at local schools in order to spark interest in the field. This has been done in connection with public health minor students as well. The Biostatistics Diversity, Equity & Inclusion Committee also engages in a journal club and book review to encourage personal and professional development. These committee opportunities, presented to students at the beginning of their experience, remain available throughout their time in SPH.

In addition, biostatistics offers up to \$800 in travel funds for students presenting their research at a conference; should a student receive additional funds from external sources, the amount may double to \$1600. In the past three academic years, 30 students have been awarded these funds.

Environmental Health Sciences (EnHS)

Students in programs within the Division of Environmental Health Sciences (EnHS) can join the Minnesota Environment Health Association (MEHA) at no cost. Additionally, students may join different types of EnHs professional organizations through might attend and even present at conferences.

Epidemiology & Community Health (EpiCH)

Students enrolled in the coordinated master's program in public health nutrition must complete a minimum community engagement requirement of 56 hours (focused on nutrition related issues). To meet this requirement, students will often run a free clinic, participate in professional organizations as a student member, or engage in Policy Day on the Hill. The majority of public health nutrition students also attend a food justice conference that takes place every other year in Duluth, MN to discuss food access in the Minnesota areas.

The Center for Leadership Education and Maternal Child Health offers deployments to a state agency or nonprofit organization. Students work directly with a master's-level professional to assist with a time-limited project. Upon completion of their deployment, students receive a scholarship from the center.

Additionally, EpiCH offers funding up to \$600 per student for travel costs and fees related to conference attendance for students who are presenting. This funding, awarded through the Division Training Committee, typically supports 4 - 5 students each year.

Health Policy & Management (HPM)

MHA students within the Division of Health Policy & Management (HPM) are introduced to the MHA Healthcare Leadership Accelerator Program. This program seeks to enhance leadership and professional development for residential and executive students. Because the program is integrated into the curriculum, students are introduced to it at the outset of their coursework. The program comprises three components:

- <u>Residential & Executive Student Accelerator</u>: The accelerator program includes formal coursework, leadership coaching to develop individual and team leadership competencies, and seminars in contemporary leadership issues. It also includes career development workshops to prepare students for fellowship and employment opportunities.
- <u>Case Writing Lab</u>: The case writing lab formalizes case and simulation development, writing, and publishing efforts. Cases are developed to support core MHA courses, including Principles of Problem Solving, Strategy, and Finance. The development of cases results from a collaboration of faculty, staff, alumni, and other industry leaders.
- <u>Industry Leadership Seminars</u>: These seminars comprise healthcare leadership learning modules offered to industry professionals in the form of a continuing education short course. Each module includes academic material on a specific topic, followed by a real-life perspective from an accomplished alumni leader.

Student involvement is also encouraged by the MHA Community Stewardship Initiative (CSI), a studentdriven organization committed to service through volunteer work at community agencies throughout the Twin Cities. We promote this organization throughout the MHA program orientation as well as through faculty and peer mentors.

2) Provide examples of professional and community service opportunities in which public health students have participated in the last three years.

Case Competitions

In October 2020, a team of SPH Division of Health Policy and Management students were named first runner-up in the <u>National Association of Health Services Executives</u> (NAHSE) virtual case competition sponsored by CommonSpirit. Alina Okamoto (MHA), Malik Williams (PHAP), and Moriam Yarrow (MHA)

competed against 37 CAHME-accredited graduate programs in health administration, business administration, and public health.

Teams in the competition were tasked to build a digital strategy for opening a service line around a chronic disease that not only focused on recovering lost revenue, but also one that was scalable and included community partnerships as well as government and advocacy groups. Our Minnesota team came up with "HealthYOU: a digital value-based population strategy for chronic care management." The strategy contained three crucial components: a "FHIR" electronic health record data activation platform, a digital telehealth care coordination platform, and coalition formation. The team used architectural innovation to leverage internal and external assets already provided, then restructured it toward hypertensive patients in the Houston, TX area.

The judges liked the team members' approach and awarded them first runner-up. Each student was awarded a \$4,000 scholarship for their tremendous effort. Senior lecturers Kim Parrish and Justine Mishek served as coaches along with other faculty and staff who supported this team throughout the process.

COVID-19 Information Sheets for Hennepin County Jail

To protect inmates in Minneapolis, MN, officials at the Hennepin County Jail reached out in April 2020 to teams from the school of public health and the medical school. The jail officials wanted help in creating COVID-19 educational videos and factsheets for people who were locked up, scared, and lacking even the most basic information on the pandemic.

The 10-person team was led by SPH affiliate assistant professor Rebecca Shlafer, an expert in providing health education to incarnated people. The team's core members included SPH students Karmen Dippmann, Carly Edson, and Rachael Mills along with medical school student Andi Maxwell. Dippmann and Edson are students in SPH's <u>community health promotion</u> program and Mills was a <u>maternal & child health</u> student.

Shlafer and her team worked closely with Maxwell and jail officials to ensure that the materials reflected the facility's current practices and approach to addressing COVID-19. To create the materials, the team took into account that incarcerated people often have low-health literacy and education levels, and likely had limited access to the details on the science and scope of COVID-19 pandemic.

Over just a couple of weeks, Edson created slides and graphics used in the video. Dippmann and Mills developed the informational sheets. Dippmann and Edson also work for the Minnesota Department of Health (MDH), and based the slides and graphics on materials they had created through MDH for other jails. Dippmann credits her unique work experience and coursework at SPH with preparing her to handle the task.

Student Ambassadors

Student ambassadors are a diverse group of student leaders from across the School of Public Health. They take active roles on campus and in their greater Twin Cities communities, in which they demonstrate passion for public health. By sharing experiences, time, and talents with prospective, admitted, and current students, ambassadors help shape the future of the School of Public Health in partnership with their peers and school administrators.

Student ambassadors gain valuable volunteer experience and develop their skills in leadership, public speaking, and community engagement. Through the ambassador program, students network with staff, faculty, and alumni, and connect with their peers. Participants also become eligible for a scholarship. Each year, approximately 25 students serve as ambassadors.

Research Day

All SPH students in all degree programs are eligible and encouraged to participate in Research Day. This event helps students learn how to design, implement, and present research results, hone skills in writing abstracts, and practice community research within a diverse group of people across the University as well

as within the public health community and the general public. Outstanding student poster presentations, in correlation with written abstracts, are recognized in an awards competition with results determined by a panel of judges who consider topic prominence, presentation objectives, purpose, practice impact, academic impact, originality, tone, and overall communication of scope, context and rationale.

Service Related Groups

SPH supports a number of groups with a service and professional development mission. These include groups such as:

- Health Equity Work Group (HEWG): supports the training of SPH students to work in a diverse society as they engage in work related to health disparities and create spaces for dialogue.
- Maternal and Child Health (MCH) Interest Group: connects SPH students with community outreach opportunities, provides space for learning and collaboration to better the health of mothers, children and family.
- Public Health Review: graduate student led, online, peer-reviewed, open-access public health journal published by the UMN Libraries that provides SPH students the opportunity to publish material related to public health.
- Public Health Advocacy Student Alliance (PHASA): empowers students to improve public health through policy and advocacy through hands-on experience with advocacy and relationship building with public health experts.

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

Strengths

- Students can register for a non-credit/no-tuition course in order to participate in a community engagement experience.
- Students have an extensive number of opportunities to engage in service and community engagement within the University community and the surrounding Twin Cities.
- Scholarships at the school and program level support student participation in national conferences.
- We honor and recognize students for their service achievements in schoolwide communications, which further promotes student engagement in services.

Weaknesses

• Accurately capturing and tracking the vast array of student service engagements and their impact in the community is a challenge.

Plans for Improvement

- We aim to streamline communication for service opportunities in order to alert students in a timely manner.
- By improving student access to databases of opportunities and organization contacts, we can make it easier to find service opportunities.
- We plan to explore options for allowing students to track their experiences and for SPH to understand the impact SPH students have in the surrounding community.

F3. Assessment of the Community's Professional Development Needs

The school periodically assesses the professional development needs of individuals currently serving public health functions in its self-defined priority community or communities.

1) Define the school's professional community or communities of interest and the rationale for this choice.

SPH develops and provides the majority of its professional and workforce development opportunities through grant-funded centers. SPH primarily focuses on the following communities: agricultural workforce; occupational safety professionals; workers from various occupations who may be exposed to hazardous materials; nutrition workforce; and maternal and child health workforce. SPH has decades of leadership and established community connections in all of these areas. The work done in these areas directly affects the workforce and industries within the state of Minnesota, a critical part of UMN's land-grant mission, but that also extends nationally and internationally.

Specific communities of interest are the following:

- Agricultural workforce
 - Served via the Upper Midwest Agricultural Safety and Health Center (UMASH)
- Occupational safety professionals including occupational health nurses, industrial hygienists, and occupational medicine physicians
 - Served via the Midwest Center for Occupational Health and Safety (MCOHS)
- Workers from various occupations may be exposed to hazardous materials
 - Served via the Midwest Consortium for Hazardous Waste Worker Training (MWC)
- Dietitians, nutritionists, nurses, and others who provide nutrition-related services to pregnant and postpartum women, infants, children, adolescents, and their families
 - \circ $\,$ Served via the Leadership Education and Training Program in MCH Nutrition $\,$
- Current and future public health maternal and child health (MCH) workforce, and agencies funded through Title V or that serve MCH populations
 - Served via the Center for Leadership Education in Maternal and Child Public Health, a HRSA-funded Center of Excellence

2) Describe how the school periodically assess the professional development needs of its priority community or communities, and provide summary results of these assessments. Describe how often assessment occurs.

Each grant-funded center works with their own advisory boards to assess the needs of their communities of interest. The assessments may be formal or informal. See specific examples below, as well as in the Electronic Resource File, Criterion F folder, F3.2 subfolder.

Upper Midwest Agricultural Safety and Health Center (UMASH)

UMASH is a Center of Excellence in Agricultural Disease and Injury Research, Education, and Prevention funded by the National Institute for Occupational Safety and Health (NIOSH). The center is a collaboration of the University of Minnesota's School of Public Health and College of Veterinary Medicine, the National Farm Medicine Center of the Marshfield Clinic with the Migrant Clinicians Network, and the Minnesota Department of Health. This collaboration brings together unique and complementary expertise to address existing and emerging occupational health and safety issues in agriculture, thereby supporting farmers, agricultural workers, and their families in the upper Midwest.

UMASH focuses on the interrelationship between agricultural production practices, farm workplace health and safety conditions, and the interdisciplinary connections needed to address agricultural worker health and safety. Agricultural production practices are primarily driven by social, economic, and animal health, as well as productivity considerations. These agricultural production practices, in turn, strongly influence workplace health and safety conditions. This is emphasized through the concept of One Health, which engages multiple disciplines and sectors to understand the interdependence between animal health, human health, and the health of the environment. UMASH also recognizes the ever-changing nature of agriculture and its influence on the health and well-being of agricultural workers.

- Assessment of professional development needs
 - UMASH outreach staff at the University of Minnesota, the National Farm Medicine Center, and the Minnesota Department of Health engage with agricultural industry leaders, workers, and government agencies through a variety of means including advisory board, direct farm/owner contact, farm shows, investigational discussion groups, and conferences.
 - UMASH is part of a consortium of eleven NIOSH-funded Ag Centers throughout the country. They engage each other through regular monthly calls to discuss, plan, and implement multi-center collaborations on evaluation and outreach initiatives. This is through Executive Multi-Center Meetings and among Coordinators of the Evaluation, Outreach, and Coordinators (ECO) group.
- How often assessment occurs
 - Each year and emerging issue or focus area is identified by a three-step model (Scan-Prioritize-Select) used by UMASH leadership.
 - Step 1: Scan the environment for new and trending issues and prioritize a few feasible project ideas to address the issue
 - Step 2: Design, plan, and fund an intervention project (e.g., a pilot intervention or educational outreach campaign)
 - Step 3: Create a timeline of benchmarks tied to project goals and anticipated outcomes and evaluate the project(s) process and outcomes.
- The identified emerging issue supports the development of community forum for discussion that results in seed funding to support community identified and led programs. Enclosed is a summary of emerging issues:
 - Stress and mental heath
 - Manure management
 - Anti-microbial resistance
 - Aging on the farm
- These are evaluated by evidence of community engagement, number of individuals reached, multiplication of engagement and outreach events, and types of products developed. Also, an assessment of community receptivity (i.e. perceived value) is conducted.

Midwest Center for Occupational Health and Safety (MCOHS)

The Continuing Education (CE) Program has been an integral and dynamic component of the Midwest Center for Occupational Health and Safety (MCOHS) Education and Research Center (ERC) for more than 40 years. It is the only National Institute for Occupational Safety and Health (NIOSH) supported CE program serving Occupational Safety and Health (OSH) practitioners in the MCOHS-assigned region, which covers Minnesota (MN), Wisconsin (WI), and the Dakotas (ND, SD). The overall goal of the MCOHS CE Program is to improve occupational and environmental health and safety through the transmission of knowledge, skill, and understanding to those responsible for workplace health and safety.

- Assessment of professional development needs
 - During 2015 2016 and 2017 2018, we conducted two multi-state CE needs assessments. The first, a regional needs assessment, we administered in coordination with MAP and Rocky Mountain Center for Occupational and Environmental Health. The second, an Education and Research Center (ERC) CE national needs assessment, was completed by all NIOSH-supported ERC CE programs in 2017 – 2018. A convenience sample of 2,064 workers representing all 50 states responded to the survey; occupational
safety professionals, occupational health nurses, industrial hygienists, occupational medicine physicians, and total worker health professionals were represented.

- How often assessment occurs
 - During 2015 2016 and 2017 2018, two multi-state CE needs assessments took place.
- Summary of results of assessment
 - In the two needs assessment completed by all NIOSH-supported ERC CE programs in 2017-2018, 80 – 90% of respondents indicated high interest in topics that included legal issues, compliance with new standards, risk management, management issues, risk communication, and accident prevention. This is based on workplace concerns about safety culture, health promotion, injury prevention, occupational stress, and musculoskeletal injuries.

Midwest Consortium for Hazardous Waste Worker Training (MWC)

The Midwest Consortium for Hazardous Waste Worker Training has been funded since 1987 by the National Institute of Environmental Health Sciences (NIEHS) to develop, present and evaluate model worker training programs

Long-term, MWC seeks to improve occupational and environmental health and safety throughout the region it serves. More immediately, MWC seeks to build capacity for workers to improve the workplace and for communities of workers and residents to recognize, prepare for, and recover from environmental exposures. To achieve this, MWC facilitates the delivery of model training programs at MWC centers, enables training of diverse groups of participants who will not otherwise receive enough training about hazardous substances, and continually evaluates and improve the delivery of the MWC's worker and community training. Achieving these aims will allow the MWC to continue to develop and implement innovative training, address emerging topics such as opioids and worker health, and extend community resilience training to a broader context as needs arise.

- Assessment of professional development needs
 - Training centers work with partners in their own regions to identify needs and opportunities for worker and community training.
 - MWC maintains a comprehensive evaluation program that documents the knowledge and skills developed by program participants and identifies training impacts.
 - MWC emphasizes collaborative development and local delivery of model programs, with ongoing continuous improvement.
 - Because this award is a cooperative agreement with the National Institute of Environmental Health Sciences Worker Training Program (WTP), the WTP helps MWC identify professional development needs that are common across the U.S.
- How often assessment occurs
 - A comprehensive report of evaluation feedback is provided for the majority of delivered programs. The principal investigator and the training center program director review each report to improve training.
 - The Evaluation Services Center at the University of Cincinnati produces an annual evaluation summarizing survey responses across all the delivered programs for the year, and tracking evaluation parameters over time.
 - Each month, training centers have the opportunity to provide impact statements from trainees and employers illustrating the outcomes of training. These impacts are categorized by Kirkpatrick levels 4 (Results), 3 (Behavior), or 2 (Learning).
 - MWC convenes monthly meetings with training centers via Zoom to identify and resolve issues.
 - Once a year, the Internal Steering Committee meets to work on continuous improvement efforts.
 - Once a year, the MWC Administration and the Internal Steering Committee meet with the External Advisory Board for their assessment of training progress and recommendations for improvements and new training opportunities.

- Summary of results of assessment
 - As a result of local and national assessments, emerging topics for which new training curricula have recently been developed include COVID-19 emergency response, opioid addiction, and worker health.
 - With the U.S. and the Midwest region facing greater risk for weather-related disasters due to climate change, MWC training centers have developed resilience projects to help workers and community members prepare to respond and protect themselves during a disaster.
 - Spurred by in-person training restrictions during the pandemic and with the encouragement of the External Advisory Board, MWC has developed capabilities in online learning and hybrid approaches. Some training occurs online while certain required portions (such as when trainees need to learn how to dress out in full protective gear) take place in person.

Leadership Education and Training Program in MCH Nutrition (LET)

The Leadership Education and Training Program in MCH Nutrition provides training and technical assistance to support workforce development for dietitians, nutritionists, nurses, and others who provide nutrition-related services to pregnant and postpartum women, infants, children, adolescents, and their families. As one of eight MCH nutrition training grants in the U.S., our primary service area for technical assistance (TA) is HRSA Regions V and VII and bordering states of Region VIII. However, our CE is available nationally and TA is provided to any state that requests assistance.

LET trains the current MCH and public health nutrition workforce in a variety of ways, including continuing education conferences (such as the National Maternal Nutrition Intensive Course), hands-on training and technical assistance sessions, and workforce development programs such as the Emerging Nutrition Leaders Training Institute.

- Assessment of professional development needs
 - The assessment is completed via a search of the Title V Information System, which provides information on needs assessment results and priority health issues of each state as well as by region; literature reviews of key MCH and public health nutrition topics; interviews with state public health nutritionists from across the US and within Minnesota; and a review of existing workforce development surveys (Public Health Workforce Interests and Needs Survey (PH WINS), Association of State Public Health Nutritionists (ASPHN) workforce survey, Academy of Nutrition and Dietetics workforce survey, etc.).
- How often assessment occurs
 - A needs assessment specific to public health nutrition and MCH nutrition is done every five years in preparation for the five-year continuing competitive renewal application.
- Summary of results of assessment
 - Public Health Nutrition and MCH Workforce Trends. Needs assessment data gathered by the Association of State Public Health Nutritionists (ASPHN) suggest that 51% of state nutritionist staff are not involved with MCH Title V Block Grant applications or services in their states. This signals a large potential gap in the ability of states to plan, provide, and evaluate nutrition policies and services that would meet the specific and unique needs of MCH populations. The same survey found that 26% of state nutritionists expected to retire by 2020 and an additional 15% were planning to retire, with fewer than half stating they would definitely not retire by 2020. These results are startling, as this would leave a large leadership gap if mid-career level public health nutritionists are not adequately prepared to assume state leadership roles.

In addition to the lack of nutritionists involved in Title V programs, the public health nutrition and MCH workforce does not reflect the populations it serves. National data suggest particular underrepresentation of specific racial/ethnic in nutrition and dietetics. A recent survey of sex, race, and ethnic diversity of U.S. health occupations found underrepresentation of Hispanics and Al/AN across all health professions, including nutrition. Interestingly, dietitians and nutritionists were one of only two diagnosing/treating health professions in which the Black workforce was reflective of the U.S. population. Data from the Commission on Dietetic Registration suggests only 3% of the dietetics workforce identifies as Black or African American. However, In Minnesota, a large proportion of our Black population are first- or second-generation African immigrants, who are underrepresented in our local public health and nutrition workforce. American Indians had the lowest representation in the healthcare workforce of all racial/ethnic groups on a national level, which is similar to what we experience in Minnesota. The ability of the PHN workforce to meet the needs of increasingly diverse MCH populations will depend on opportunities for graduate-level training, CE, and TA specific to MCH nutrition focused on leadership development, cultural competence, reducing health disparities, and integrating public health and clinical services for women, children and families. Further, these efforts must prioritize the leadership development and training of members of under-represented communities in the public health nutrition and MCH workforce.

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

Strengths

• SPH faculty have a long history of deep connections to communities of interest, as well as expertise in assessing how to best meet the needs of those communities.

Weaknesses

• None.

F4. Delivery of Professional Development Opportunities for the Workforce

The school advances public health by addressing the professional development needs of the current public health workforce, broadly defined, based on assessment activities described in Criterion F3. Professional development offerings can be for-credit or not-for-credit and can be one-time or sustained offerings.

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.

Upper Midwest Agricultural Safety and Health Center (UMASH)

UMASH develops and implements their identified projects through emerging issues funds supplied to regional partners who support community led initiatives. This three-step model aims to identify emerging issues in rural farm safety and health, then locate community-University partners to address those issues. Some examples include:

- Supporting <u>mental health for women in agriculture</u> through extension or other communitybased programs
- Training immigrant dairy workers and developing work safety leaders through the <u>Promoting</u> <u>Safety and Worker Health for Immigrant Dairy Workers</u> project
- Offering a <u>webinar series</u> on wide ranging topics, including farm safety with livestock and produce, child agricultural safety and health, aging on the farm, or Parkinson's and farming
- Participating in national and local events to increase awareness about agricultural safety and health hazards and provide resources for preventing illness and injury. <u>http://umash.umn.edu/ag-awareness/</u>

Midwest Center for Occupational Health and Safety (MCOHS)

Training topics and modes of delivery emerge from the needs assessments. MCOHS presents both inperson and online continuing education courses. The number of courses offered increased from 43 in 2015 – 2016 to 71 in 2018 – 2019. Online trainings are offered to increase access to trainings, particularly by rural workers in our region.

During the five-year grant cycle, CE reached 5,115 learners via online and mixed format courses. MCOHS continues to offer free online modules because of concerns about cost, time and travel constraints, especially among marginalized OSH workers. By offering a robust suite of free online modules that are available on an ongoing basis, MCOHS CE further improves health equity for worker populations that may not have access to training courses scheduled during traditional working hours.

Midwest Consortium for Hazardous Waste Worker Training (MWC)

The Midwest Consortium for Hazardous Waste Worker Training (MWC) provides model training programs to adult workers and residents who might be exposed to hazardous substances. This programming is delivered by 13 training centers in nine states: Illinois, Indiana, Kentucky, Michigan, Minnesota, North Dakota, Ohio, Tennessee, and Wisconsin. Eight of the centers are equipment-based centers that focus most strongly on HAZWOPER and related training for workers at designated hazardous waste sites; treatment, storage, and disposal facilities; and in a broad range of emergency response roles. The five remaining centers are community-based centers that focus on helping workers and residents, particularly those from underserved populations, to recognize and react to hazardous materials in their communities. The training centers include labor-affiliated programs, three major research universities, two community colleges, an historically black university, an affiliate of a national youth training organization, a tribal nation, and several other community-based organizations, all of which form and nurture partnerships locally and regionally. From 2015 – 2020, MWC training centers provided 5,495 programs to 90,237 trainees for 625,588 contact hours, demonstrating the impressive reach of the Consortium.

Leadership Education and Training Program in MCH Nutrition (LET)

The LET Program training grant activities are all driven by the needs assessment. Based on the findings of the 5 year needs assessment, the LET Program was funded to complete a variety of workforce development activities including:

- 1. Provide a comprehensive graduate training program with a focus on MCH nutrition and public health nutrition leadership. This is accomplished by all of our trainees completing the following courses which were developed and/or are taught by training grant faculty:
 - PubH 6901: Foundations of Public Health Nutrition Leadership
 - PubH 6907: Maternal, Infant, Child and Adolescent Nutrition
 - PubH 6950: From Kid to Community: Personal, Social and Environmental Influences on Youth Obesity
 - PubH 6955: Using Policy to Address Child and Adolescent Obesity Prevention
- 2. Provide continuing education on cutting edge MCH nutrition topics each year. This is accomplished through the National Maternal and Infant Nutrition Conference and through technical assistance activities that state and local health organizations request on demand.
- 3. Provide didactic and hands-on learning opportunities for graduate students, faculty, and Minnesota Department of Health staff on the use of a positive deviance approach that integrates qualitative and mixed-methods of research to address health issues, particularly those leading to significant racial/ethnic and geographical disparities.
- 4. Provide leadership training for mid-career dietitians/nutritionists serving MCH populations to prepare them for state leadership roles as current state leaders enter retirement.

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).

Example 1: The National Maternal Nutrition Intensive Course (MNIC)

MNIC is an annual offering from the Leadership Education and Training Program in MCH Nutrition (LET). Learners can choose between an in-person conference and a time-limited remote learning option. This continuing education program is designed for dietitians, nutritionists, certified nurse midwives, registered nurses and nurse practitioners, physicians and public health professionals who serve preconceptual, pregnant, postpartum, and breastfeeding women, infants, children and families.

In 2020, the entire program was held online and offered either live or recorded.

- Total live participants: 265
- Total recorded participants: 1637

<u>Example 2</u>: Midwest Center for Occupational Health and Safety (MCOHS) training and safety courses MCOHS developed and offered eight new just-in-time occupational health and safety training courses in 2019-2021. These courses were designed based on the needs assessment results in 2017 – 2018 to specifically address interdisciplinary competencies in occupational health and safety and meet the ever-changing training needs of professionals.

Launched in 2019 (the number of participants are listed by year):

- Integrated Approaches Supporting Healthy Work: Total Worker Health™
 - o 2019: 15
 - o **2020: 42**
 - o **2021: 20**
 - Opioids and Occupational Health Providers
 - o **2019: 18**
 - o **2020: 33**
 - o **2021: 22**
- Americans with Disabilities Act: Part I and II
 - o **2019: 47**

- o **2020: 86**
- o **2021:46**
- Workers' Compensation and Injuries
 - o **2019: 21**
 - o **2020: 43**
 - o **2021: 31**
- Introduction to Occupational Health and Safety for Nurses
 - o **2019: 21**
 - o **2020: 48**
 - o **2021: 81**
- Business Acumen and Skills for Occupational and Environmental Health and Safety Professionals: Part 1) Budgeting and Contracting; Part 2) Business Etiquette and Competencies
 - o^{2019: 38}
 - o **2020: 116**
 - o **2021: 36**
- Sleeper: Truckers and Obstructive Sleep Apnea
 - o **2019: 19**
 - o **2020: 28**
 - o **2021: 16**

Launched in 2020:

- Occupational Exposure Limits
 - o 2020: 16
 - o **2021: 22**
- Hazard Recognition
 - o 2020: 27
 - o **2021: 23**
- Minnesota OSHA Consultation and Ergonomics in the Workplace
 - o 2020: 16
 - o **2021: 13**

Example 3: Midwest Consortium for Hazardous Waste Worker Training (MWC)

MWC provides model training programs to adult workers and residents possibly exposed to hazardous substances. This programming is delivered by 13 training centers in nine states: Illinois, Indiana, Kentucky, Michigan, Minnesota, North Dakota, Ohio, Tennessee, and Wisconsin. From 2015 – 2020, MWC training centers provided 5,495 programs to 90,237 trainees for 625,588 contact hours, demonstrating the impressive reach of the Consortium.

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

Strengths

• SPH has a long history of providing professional development opportunities for the workforce and demonstrates a deep capacity to deliver a variety of professional development opportunities for the workforce. Specifically, in addition to hosting an annual Public Health Institute (PHI) for three intensive weeks of learning each May-June, the SPH organizes and promotes opportunities throughout the year for practitioners and others to attend presentations and seminars on public health challenges and issues. For the past 20 years, these opportunities have been enhanced through major investments in learning technology, curriculum design, remote learning opportunities increasing our reach to relevant audiences, and curation of recorded material available on demand.

Weaknesses

• The decentralized structure for our continuing and professional development results in uneven support for existing efforts and for launching new ideas. Also, decentralization leads to inclusion gaps in the professional communities of interest.

G1. Diversity and Cultural Competence

Aspects of diversity may include age, country of birth, disability, ethnicity, gender, gender identity, language, national origin, race, historical under-representation, refugee status, religion, culture, sexual orientation, health status, community affiliation and socioeconomic status. This list is not intended to be exhaustive.

Cultural competence, in this criterion's context, refers to competencies for working with diverse individuals and communities in ways that are appropriate and responsive to relevant cultural factors. Requisite competencies include self-awareness, open-minded inquiry and assessment and the ability to recognize and adapt to cultural differences, especially as these differences may vary from the school's dominant culture. Reflecting on the public health context, recognizing that cultural differences affect all aspects of health and health systems, cultural competence refers to the competencies for recognizing and adapting to cultural differences and being conscious of these differences in the school's scholarship and/or community engagement.

Preface

Our framework for this important work rests on the values of diversity, equity, inclusiveness, and the active use of an antiracist lens. These values must guide academic public health in educating and training workforces in both the sciences and practice professions. Likewise, schools and programs of public health must educate a workforce that reflects America's increasing diversity. Therefore, cultural competencies in diversity, equity, inclusiveness, and antiracism are core to SPH's academic mission in education, research, and community engagement. Establishing and continuously developing these cultural competencies requires external partnerships and collaborations. Black, Indigenous and People of Color (BIPOC) communities have endured centuries of unique and layered oppressions which continue to impact them today. And the spring 2020 murder of George Floyd in our own backyard brought us face to face with the terrible, long-standing impact of racism and other forms of oppression.

For some 400 years since the beginning of the European settlement of North America, BIPOC communities have experienced genocide, chattel slavery, the denial of human rights, and the oppression and destruction of their families, communities, and cultures. The concept of "white supremacy" emerged as the underlying moral and political conviction justifying these acts. Centuries later, the United States still remains awash in the structural racism of white supremacy embedded in its history, laws, and institutions. Structural racism continues to deny equity to non-whites in education, economic sustenance, health and wellbeing, and other conditions that create and support healthy communities and populations.

Despite some advances, recent events underscore the reality racism as a 400-year-old public health emergency. BIPOC populations experience chronically worse health than their white counterparts. Groups marginalized for reasons other than race are often disadvantaged, too. Ironically, the health of whites in the United States is among the worst of the world's richest nations, underscoring that suppression and discrimination harms everyone. A key role of public health is eliminating and remediating the conditions that prevent health and wellbeing for all.

The SPH mission is to "...improve the health and well-being of populations and communities around the world through excellence in research and education, and by advancing policies and practices that sustain health equity for all." We envision a world where all people thrive throughout their lives with optimum health and wellbeing. Accordingly, one of our major goals is to advance diversity, equity, inclusion, justice and antiracism in our education, research, and community engagement. Later in this section, we describe the metrics by which we measure our success. Supporting documentation can be found in the Electronic Resource File, Criterion G folder.

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.

Within the BIPOC community, the groups we consider priority populations for students, faculty, and staff recruitment and support are:

- 1. Black, both those of multigenerational American heritage and those from newer immigrant populations,
- 2. Native American/American Indian, and
- 3. Hispanic/Latino

The process of identifying our priority populations began with comparing the racial/ethnic demographics of Minnesotans and the SPH, as shown in table, below. We identified Black, Native American/American Indian (NA/AI) and Hispanic/Latino as our priority population populations because they are traditionally under-served and under-represented in our school compared with statewide demographics (see Table G below).

Table G - Race/Ethnicity Demographics: 2020 State Demographics Compared with AY 2020/21 Stud	dent
Populations & 2019 Staff/Faculty	

	Minnesota	Enrolled Students	Staff	Faculty
Hispanic/Latino	5.6%	1.3%	2.3%	1.7%
Native American/Amer ican Indian	1.4%	0.5%	0.3%	0.8%
Asian/ Pacific Islander	5.2%	6.9%	7.2%	15.8%
Black	7.0%	6.3%	5.9%	3.3%
White	83.8%	59.6%	83.0%	78.3%
Multi	2.6%	7.8%	Not available	Not available
% BIPOC	20.9%	22.8%	15.7%	21.7%

Source for MN demographics: https://www.census.gov/quickfacts/MN

Data not included in this table are international students and students who did not state how they identify racially or ethnically.

We believe that improving our climate and school culture for Black, NA/AI and Hispanic/Latino community members will ultimately benefit all communities.

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.

Ultimately, our goal is to align our racial and ethnic demographics with those of the state. Based on data collected at both the school and University levels, we understand that to achieve this goal, we must first improve the SPH climate for our priority populations. We track demographic information to measure our success in recruiting and retaining diverse groups of students, staff, and faculty. To measure progress toward improving school climate, our community participates in three systematic assessments:

- UMN Employee Engagement Survey (every other year)
- SPH Climate Assessment (new as of fall 2020)
- Student Engagement Survey (historically every year; in the process of being revised)
- Graduate Student Experience in the Research University (GradSERU) survey (every other year)

We seek particularly to improve a sense of belonging among those in our priority populations. Demographic and assessment data are detailed below in documentation requests five and six.

By intention, we align our strategy and goals with the larger UMN strategic plan, MPact 2025. The MPact 2025 goal of "fostering a welcoming community that values belonging, equity, diversity, and dignity in people and ideas" dovetails with our *SPH Goal 5 Diversity, Equity, and Inclusion:* Advance diversity, equity, inclusion, justice, and antiracism in our education, research, and community engagement.

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.

To improve the sense of belonging and inclusion in SPH, and to facilitate retention and success of our priority populations, we developed and launched a <u>SPH Strategic Plan for Antiracism</u>. We acknowledge and reject the racism and injustice woven into the fabric of our institutions, and are working for resolute change. The strategic plan builds on our core values and commitment to make antiracism central to our mission and operations. The strategic plan presents a clearly defined set of goals and actions to guide our efforts for 2021 – 2026.

Below, we describe how we developed the strategic plan, including the use of data and stakeholder involvement. We also describe University level resources, programs, offices, and initiatives that support and enhance the student, staff, and faculty experience during their time at SPH.

Development of the SPH Strategic Plan for Antiracism

The decision to develop a Strategic Plan for Antiracism emerged both from student engagement surveys as well as from a recognized need for clear goals and planning to address many previously identified issues throughout SPH regarding diversity, equity, inclusion (DEI), and antiracism. In early 2020, SPH hired the consulting firm Strategic Diversity Initiatives (SDI) to facilitate the planning process. Plan development began in May. SDI collaborated with the DEI director to lead the process, which involved fully engaging with stakeholders from across the school community and clarifying important goals for the school. SDI facilitated all committee meetings, helped edit all major documents, and offered feedback along the way to the DEI director. This external consultant input was invaluable as they also offered an unbiased view of the school and its needs.

The DEI director and consultants collaborated on the first-of-its-kind SPH climate assessment for students, staff, and faculty in fall 2020. That survey included the entire school community, as well as focus groups and individual interviews with key stakeholders. Data are presented below in documentation requests five and six. Briefly, the assessment identified areas of strength as well as opportunities for growth, while illuminating the school's multi-layered, complex culture and climate. Through this assessment, our community clearly expressed that the school had not been adequately prioritizing DEI in admissions, recruiting and hiring, and other important decisions. Over 95% of respondents stated that DEI should be the most important, or a top priority, for SPH.

A year after the strategic planning process started, a draft strategic plan was presented to the SPH through community forum events and meetings with division DEI work groups and other stakeholders. Multiple opportunities for feedback resulted in high levels of participation and engagement with the community. After several months of reflective, intentional work, the strategic plan was finalized in July 2021.

The SPH Strategic Plan for Antiracism identified five areas of focus: leadership, students, faculty, staff, and alumni. The broad goals associated with each commitment area and the actions and strategies for achieving the goals are described in detail in the <u>SPH Strategic Plan for Antiracism</u>.

To specifically address recruitment and retention, the DEI director teamed up with crucial SPH stakeholders including human resources and student recruitment/enrollment staff while developing the strategic plan. These stakeholders remain critical partners in helping to achieve not only our goal to improve SPH climate but also our goal to increase our priority population representation and success. Together, stakeholders identified goals and action plans for their individual teams. Along with reporting on recruitment, hiring, retention, development, compensation, and engagement, HR designed team goals for the next five years. They will focus on reviewing and updating hiring practices, implementing DEI into onboarding, and orientation and training, with the goal of ultimately hiring more priority population faculty and staff, and making sure all employees understand the SPH commitment to antiracism, justice, and equity.

The other critical partner, the student recruitment and enrollment staff, have 30 years of valuable experience and are committed to implementing DEI principles into student recruitment. Based on climate assessment data, and with the guidance of the DEI director, they agree it is in the school's best interest to focus on improving the SPH climate before investing more resources into continuing to increase the number of BIPOC students in the school. In addition to being academically successful, we want all students to have positive experiences in the school and translate their experiences of an inclusive climate into their future professional work. See Section H4 for a complete description of student recruitment.

Importantly, all SPH programs removed the GRE requirement in 2020 in another effort to reduce barriers to admission. In addition, a subcommittee of the Educational Policy Committee is reviewing admissions policies and procedures to support the development of best practices for admissions committees.

Antiracism Work at the Division Level

In addition to our school-level efforts, more local initiatives across our four divisions also seek to improve the climate, increase the representation, and support the persistence and success of our priority populations. Examples of these initiatives include the effort to connect applicants and prospective students with current SPH students who share similar interests, backgrounds, or professional goals. This allows prospective students to ask questions and authentically learn about the student experience from others in their peer group. The process allows applicants to better envision their own likely experience as a student. This process aims to be both transparent and trauma-reducing as students make decisions about where to further their educational career.

All division and programs have reviewed and re-examined their holistic application review processes to ensure every application is evaluated thoroughly without bias. We have prioritized diversity of applicant backgrounds and experiences in order to bring our demographic distributions into better alignment with the state of Minnesota, as well as to enrich cohorts and classrooms. In addition to evaluating the academic performance and research and professional potential of applicants, we also consider nonacademic factors including parental education, citizenship, financial hardship, language spoken at home or acquired languages, volunteer activities, race/ethnicity, and educational background (e.g., undergraduate work at tribal, community, or single gender institutions).

Curricular success and student satisfaction depend on effective advising and mentoring. Although divisions may differ in these practices, all share the desire for students to have equal access to strong advisors and mentors. Examples of some division practices for advising and mentoring operations are:

- Incoming doctoral students are assigned a peer mentor within their area of emphasis and hold monthly meetings in an effort to provide support
- Mentors partner with other UMN departments and national organizations that promote diversity in the sciences
- Mentor representatives may attend conferences to strengthen their mentoring skills
- Lunches and speakers hosted to discuss challenges faced by women in academia

Just as we review our admissions processes across divisions, we also review hiring procedures, and provide continual training to employees on hiring best-practices set forth by the UMN. This training addresses implicit bias, and emphasizes our school-wide commitment to making hiring pools appropriately representative.

Several University-level programs and services complement our antiracism work. Examples include the following:

- Office of Equity and Diversity (<u>https://diversity.umn.edu/about-oed</u>) whose vision it is to build a University where diversity, equity, and inclusion are recognized as core institutional values that drive decision-making, resource allocation, and the development of all policies and practices; where diverse students, staff, and faculty are recruited, retained, and supported; and where collaborative internal and external partnerships support the emerging needs of students, staff, faculty, and the communities in which we live and work.
 - OED offers several programs including the Institute for Diversity, Equity, and Advocacy (IDEA)(<u>http://idea.umn.edu/</u>). IDEA seeks to create an equitable and inclusive environment where diverse faculty and students can reach their fullest potential and excel in their scholarship. This community of scholars is composed of individuals who, through their distinctive viewpoints, contribute to the intellectual culture of the University of Minnesota.
 - IDEA provides a variety of funding opportunities including bridge funding for faculty of color and multicultural research awards. The new "Faculty Driven" initiative invites faculty to apply for funding to launch projects that seek to creatively address equity and diversity needs within their departments. Symposia and faculty development programs and mentorships are other cornerstones of this program.
 - College MADE (Multicultural Access, Diversity, and Equity) Initiative (<u>https://diversity.umn.edu/collegemade</u>) "provides individual colleges within the University of Minnesota with data-driven approaches to increase representational diversity, improve campus climate, and create partnerships to grow diversity, equity, and inclusive excellence across our campuses."
- The Graduate School Diversity Office (<u>https://grad.umn.edu/diversity</u>) leads and coordinates the University's initiatives in the recruitment, funding, retention, and graduation of a diverse graduate student body. Additionally, this office works closely with other organizations connected to diversity, underrepresented populations, and multiculturalism. Specific examples of resources available to students, staff and faculty include:
 - Community of Scholars Program Writing Initiative: (<u>https://grad.umn.edu/diversity/community-scholars-program/community-scholars-program-writing-initiative</u>) strives to build communities of practice by fostering writing communities that affirm and acknowledge our students' identities as Indigenous and as domestic students of color. Through individual writing consultations and writing related programming, the COSP Writing Initiative cultivates spaces where BIPOC graduate writers are supported in their writing practice and grounded in community.
 - Diversity of Views & Experiences Fellowship (DOVE Fellowship): https://grad.umn.edu/funding/program-requests-nominations/diversity-views-experiencefellowship-dove) assists graduate programs in the recruitment and support of academically excellent students with diverse ethnic, racial, economic, and educational backgrounds and experiences.

Provost's Professional Education Diversity Fellowship 2021-2022: (<u>https://provost.umn.edu/provosts-professional-education-diversity-fellowship-2021-2022</u>) assists professional degree programs in promoting a diversity of views, experiences, and ideas through the recruitment and support of academically excellent students with diverse ethnic, racial, economic, and educational backgrounds and experiences. Programs are encouraged to consider students from groups that historically have been underrepresented in their disciplines.

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.

As strategic planning was underway during summer 2020, George Floyd was murdered just a few miles from the UMN campus. Communities around our city, state, country, and world rose up to demand justice and promote antiracist change, and the University and SPH were forced to reckon with the ongoing impacts of systemic racism. This fueled the urgency to address DEI and structural racism. To harness energy, align efforts, and represent the unique and diverse perspectives across the school, the DEI director, consultant, and strategic planning committee brought the planning process into greater focus and encouraged all SPH faculty, staff, students, and alumni from across the school to contribute.

Many activities listed in our <u>Strategic Plan for Antiracism</u> will contribute to creating and maintaining a culturally inclusive environment. For example, the strategic plan includes goals to increase the recruitment and hiring of faculty and staff from marginalized communities, particularly those who are Black, Indigenous, and people of color. In addition to the strategic plan, we have several other initiatives support the creation and maintenance of a culturally competent environment, as described below.

Curricular Requirements

Curricular requirements that support our cultural competence goals include the dynamic revision of one of our public health core courses PubH 6250: Foundations of Public Health (which is required for the majority of SPH students). We assembled a diverse team that included a teaching specialist, an instructional designer, two PhD students, and one MPH alumna representing a diversity of race, ethnicity, gender, and other identities. This team engaged in a semester-long course assessment and redesign with the goal of increasing diversity and inclusion from content to facilitation to assessment. The team collaboratively and deeply reviewed each existing course component, comparing them against best practices for antiracism, inclusion, and accessibility. In addition to adhering to the CEPH knowledge domains and competencies, the team further assessed opportunities to strengthen alignment with the school-wide goals of diversity, equity, and inclusion.

Examples of training and courses that create and sustain a culturally competent environment include the following:

- The Training and Development committee (a subcommittee within the Educational Policy Committee), along with the DEI director, collaborated with the UMN's College of Education and Human Development to create a <u>two-part workshop</u> for all faculty on antiracism pedagogy and curriculum updates in advance of the 2020-21 academic year. 118 faculty and instructors attended synchronous modules led by trainers specializing in DEI, along with independent work that coincides with each module. Approximately 90% of faculty completed the training with very positive feedback. The intention is to have this kind of training available every academic year.
- Our student course evaluations include the question: "The instructor facilitated learning activities that deepened my knowledge of health inequalities."
- Minors and certificates:
 - Minors American Indian Health and Wellness; Health Equity; Gerontology; Global Health
 - Certificates American Indian Health and Wellness; Global Health
- Courses that address health equity:
 - **PubH 6055: Social Inequalities in Health.** This course examines the extent and causes of social inequalities in health, the degree to which understanding of these inequalities is hampered by methodological limitations in health research. It focuses on individual,

community, and policy approaches to reducing social inequalities in health. (2 cr)

- PubH 6241: American Indian Public Health & Wellness, Health Policy, Law, Health Services Administration. Students will examine the public health issues facing American Indian communities, review historical implications, analyze legislation, apply specific financing requirements, and gain an understanding of the unique American Indian public health system and the complex set of services, activities, collaborations, and stakeholders that varies by tribe and region. (2 cr)
- PubH 6242: Cultural Humility with American Indian Populations. The course will
 present evidence that cultural humility is a lifelong quest toward achieving positive
 outcomes in work with American Indian Tribes and American Indian communities. The
 realization of understanding how populations are driven by their respective cultures to
 their overall health and well-being is necessary to promote achievement of positive
 outcomes for stakeholders and communities. The course targets methods to help health
 professionals to ensure that health services account for individual understanding of the
 professional's knowledge and how this knowledge should be respectful of individual
 cultural preferences. (2 cr)
- PubH 6243: American Indian Research, Evaluation & Collaborations. This course will provide specific examples of data sharing agreements, Memorandums of Agreement or Understanding, legal basis for confidentiality, discuss community readiness, and community evaluations. It is designed to help students understand how to work respectfully and effectively with Tribes and American Indian communities, and to understand the basis of research, evaluation, and collaboration. This course focuses on stakeholder driven: participation, issue identification, data sharing, and benefit to community. (2 cr)
- PubH 6244: American Indian Health & Wellness Equity. While this course focuses on American Indian public health and wellness equity, there are many parallels that will be discussed as this history relates to other oppressed populations. This course will discuss the differences of health disparities and health assets from the Northern Plains Tribes to other regional areas and other populations. The course will offer examples about communication plans, hopelessness behaviors, public perceptions, resilience, and social marketing in Indian Country. (2 cr)
- PubH 6245: American Indian Environmental Health Tribal Case Studies. This course will offer an examination of historical environmental health case studies and the resulting inequities to justify methods for learning and gaining confidence in working with tribal communities, establishing collaborations to improve awareness of social and cultural contexts, honoring traditional customs, and respecting traditional spiritually practices. The focus of the course will be promotion/development of policies that include tribal participation that advances positive tribal public and environmental health. (2 cr)
- PubH 6246: General History of American Indians Post Colonization & Review of Historical Trauma. Students will learn about the legal responsibility of the United States to the 574 federally recognized tribes and tribal organizations, to provide health services to American Indians and examine the public health issues facing American Indian communities by reviewing historical implications of forced acculturation, warfare, and severely underfunded health services that have led to health inequities. Students will examine the health status of American Indian tribes and communities, and needless suffering and loss of life related to preventable and treatable illness as a matter of social justice and civil rights. (2 cr)
- **PubH 6703: Health Impact Assessment: A Tool to Promote Health Equity.** This is a skills focused course that introduces students to the six steps of an HIA, along with relevant data sources and methods. With each step, students will be given the opportunity to practice and apply key concepts. Throughout the semester, students will work in interdisciplinary teams to develop a plan for an HIA, culminating in a group

presentation. Students will also critique an HIA of their choice to see how HIAs have been used in the real world. This course will also cover emerging topics and challenges in the HIA field, including data gaps, funding, intersections with government decision making processes, and public engagement in HIAs. Students will have a chance to hear from several practitioners who will share their insights and experiences conducting HIAs in Minnesota. (1.5 cr)

- PubH 6713: Global Health in a Local Context. An experiential course on the social determinants, health equity, and leading change in Minnesota immerses students in the study of health equity, the social determinants of health, the principles and practice of global health in a local setting, and community-based healthcare. The discipline of social medicine provides a theoretical and practical framework to explore these topics. This course draws on the social sciences and social epidemiology to forge understandings of the social determinants of health; integrates the voice and decision-making power of individuals, families, and communities; is multidisciplinary and multisectoral in its responses; ensures an equity agenda; and is guided by deep, multi-faceted encounters with local contexts. (3 cr)
- PubH 6737: Structural Racism & Health. This course offers an examination of U.S. health inequities from a historical lens and discussion of present-day issues. Through the readings, discussions, and assignments in this class, students will better understand historical policies, events, and movements that have led to health inequities and connect those to contemporary issues in the United States and within the field of public health. The course takes an intersectional perspective (to race, ethnicity, gender, and class) to examine health inequities, with a specific focus on inequities related to race and racism. (2 cr)
- **PubH 6772: Health Disparities Capstone Seminar.** Readings and discussion-based seminar. Readings emphasize practice and policy solutions to health disparities. (1 cr)
- PubH 7218: Culturally Based Community Health Immersion. Students view public health practice in action and reflect on ways that urban environments impact health services for members of underserved/emerging communities. One-day field trip to a culturally specific community health setting in the Twin Cities. (0.5 cr)
- PubH 7241: Culturally Responsive Communication. Design/delivery of culturally responsive health communication. Social/cultural contexts and belief systems that shape health behavior. Cultural learning styles. Overcoming cultural barriers. Cultural motivators. (1 cr)
- **PubH 8801: Health Services Policy Analysis: Theory.** Course introduces students to the research and theoretical aspects of health policy, to enhance understanding of the equity, historical, and socio-cultural, and political context of health policy, to develop deep fluency in the health policy process and policy-relevant aspects of health services research. (1 cr)
- PubH 8345: How to be an Anti-Racist Epidemiologist. The course is designed to
 educate epidemiologists about the history of scientific racism in the US and to train them
 to identify and disrupt the racist narratives that are widespread in health sciences
 research. The goal is to create a generation of epidemiologists equipped to conduct
 scientific research that ethically engages with issues of race and racial hierarchies. We
 focus most closely on anti-Black and anti-Indigenous racism, which are the expressions
 of White supremacy with the deepest roots in the US. However, the theories and
 approaches discussed will be applicable to understanding harmful racialized narratives
 used against other marginalized population groups. (1 cr)
- Courses in the Public Health Institute (PHI) explore themes of inequality and social determinants
 of health and are often taught by community members who are subject matter experts. PHI runs
 each summer, and there is often flexibility for course topics based on what is trending in the news

and current events, as well as expanded teaching modalities. Courses range in credits from onehalf to two credits. Examples of recent courses, along with brief descriptions follow:

- Unique Public Health Aspects of Asian Health: Data Collection Through Program Implementation. Culturally-specific knowledge assists in generating effective prevention and intervention strategies. The health of Asians in America is often overlooked and understudied. In this course the epidemiology of the leading causes of disease – and their relevant exposures – among Asians in the U.S. will be introduced, with specific emphasis on Asians in Minnesota. We will discuss the need for, and barriers related to, disaggregated ethnic epidemiologic data. Community-based interventions and programs that may reduce the rates of prevalent diseases will be incorporated. Local Asian community leaders will be guest discussants in class. Specific health topics will include: Hepatitis B virus, cigarette smoking, cervical cancer, mental health, and violence against women.
- Environmental Justice, Policy and Practice. This course will provide an understanding of environmental justice, policy and practice in the US and some of the global policy impacts. Students will learn the concepts of environmental justice including environmental racism, social determinants, health, safety, race, and culture, communities, and systems and policies, assessing environmental risks. Students will have the opportunity to examine complex issues using equity, social justice and community participatory lenses. The course will also examine existing and emerging issues of environmental justice including different sources of chemical exposures from skin-lightening products and other sources, in home exposure of mercury and lead, the association between reproductive and early childhood health with chemical exposures, air pollution, beauty products environmental impacts, regulations, systems and policy changes.
- Public Health Challenges: The US Overdose Crisis. This course explores the social, medical, and cultural aspects of the modern American substance use phenomenon. A social and structural determinants framework will be used to examine the public health impact of substance use disorder on individuals and communities. The course will feature guest speakers and panelists from clinical medicine and social work, including individuals with lived experiences of substance use disorder in order to broaden insights from both clinical and experiential perspectives. It will also feature a mixture of lectures, readings, an in-class lab on the use of epidemiologic data, as well as a final project to impart a more contextual, nuanced, and in-depth understanding of substance use in modern America.
- American Indian Health and Wellness, Understanding and Applying the "Other Public Health System". In this course students will learn about the legal responsibility of the United States to provide health services to American Indians. Students will examine the public health issues facing American Indian communities, review historical implications, analyze legislation, apply specific financing requirements, and gain an understanding of the unique American Indian public health system and the complex set of services, activities, collaborations and stakeholders that varies by tribe and region. Additionally, Indigenous knowledge will be shared that offers a focus on historical holistic views and programs for health and wellness that emphasizes assets, resilience, and cultural humility. This knowledge is applicable for all populations throughout the world.
- LGBTQ Health and Policy. This class will provide an understanding of ways in which sexual orientation and gender identity are associated with health outcomes and health care access, ways in which policy impacts health, and avenues for public health professionals to improve LGBTQ health through policy action.
- Sexual Violence in the #MeToo era: Prevention, Practice, and Policy. The instructor, a forensic nurse and sexual violence prevention scientist, will encourage students to critically examine contributing and mitigating factors, gaps in what we know works (or doesn't), and multi-sectoral strategies to prevent and respond effectively. In this course, you will engage in discourse on sexual violence, in the context of other societal violence (e.g. domestic, elder abuse) and at the intersection of very real disparities and determinants of health. Gender based violence (and preventive strategies) around the

world will be examined and contextualized. You will hear from a variety of relevant stakeholders (e.g., survivors, advocates, practitioners, law enforcement, prosecutors) and you will explore (and generate) realistic public health solutions to eliminating sexual violence.

Assurance that students are exposed to faculty, staff, preceptors, guest lecturers As discussed above, the SPH Strategic Plan for Antiracism includes goals to increase the recruitment and hiring of faculty and staff from marginalized communities, particularly those who are Black, NA/AI, and Hispanic/Latino. As a result, we must create school-wide faculty and staff hiring policies and processes that prioritize antiracism.

Divisions host lunchtime groups, research seminars, and speakers on race, implicit bias, cultural stories, generational realities, impacts on public health, and culture change. Speakers from the Office of Equity & Diversity address faculty, staff, and students on how to create/reshape our environment to be more inclusive and welcoming to people of diverse backgrounds.

Many of our faculty participate actively in social justice, advocacy, and community work and hold strong connections to a rich network of nonprofits, grassroots organizations, and community stakeholders. Faculty bring these outside voices to our students both in the classroom and via out-of-class events such as a leadership series talk with a local mayor who shared her experiences of leading of a multicultural community while working in the field of public health.

Division-level committees and task forces lead cultural competency discussions at faculty and other community-wide meetings. These committees and task forces also lead seminars, provide access to (and grant time away for) trainings, serve as mental health advocates, and design strategies to strengthen and support student learning experiences. Divisions lead the way in requiring faculty training, equipping hiring committees with tools and strategies for diversifying faculty rosters, and developing education tools related to implicit bias found in data. Routine collection and analysis of data from faculty, staff, and students regarding their perceptions and experiences of current division climate helps inform evidenced-based decisions about future division endeavors, including monitoring the success in incorporating diverse voices into SPH coursework.

Regarding preceptors, students have the opportunity to participate in Applied Practice Experiences at several different organizations that require cultural competency in their practice. Some examples include: Children of Incarcerated Caregivers, D.E.L.O.R.E.S Works, Indigenous Peoples Task Force, Korean Adoptee Ministry Center, Meals From The Heart, Minnesota Public Health Association, The Aliveness Project, Minnesota FoodShare, English Learning Center; Centro Tyrone Guzman, Minnesota Correctional Facility Shakopee, state and local health departments.

SPH's very active and successful mentor program connects public health students to public health professionals to help with career and professional development.

- In FY21, the mentor program added new options to both the mentor and mentee applications; these questions addressed race and ethnicity, as well as other identities the mentor program staff determined to be relevant. This new data collection allowed program participants to indicate the level of priority they felt about being matched with someone with the same identity. The team used this data to inform the mentor matching progress. Interesting and important results emerged:
 - We received 311 total responses from 166 mentees and 145 mentors.
 - Of those 311 responses, 60% indicated their preference to be matched with someone of a similar background or identity.
 - Looking at the data by race/ethnicity, the following groups indicated they either wanted or strongly preferred to be matched with someone of a similar background:
 - 92.6% Asian respondents
 - 85% Black/African American respondents
 - 71.5% of Hispanic respondents
 - 93.4% of Multi-racial respondents

- 69% of those who identified as first-generation college students or from the LGBTQ community also indicated a strong preference for being matched with someone of a similar background.
- The mentor program team also added demographic questions to the program evaluation to understand if either students or mentors experienced the program differently based on their identity. Findings will inform future programmatic changes to ensure that our programs are inclusive for all participants.
- Mentor program participants were invited to a DEI discussion group in April 2021 with the goal of creating intentional space for mentors and mentees to learn in a group setting. Discussion was facilitated by a trained moderator. We piloted this discussion group in 2021 and plan to offer similar discussions each year.

Faculty and student scholarship and/or community engagement activities

SPH launched a <u>Center for Antiracism Research for Health Equity</u> in 2021. Rachel Hardeman, associate professor and Blue Cross Endowed Professor of Health and Racial Equity, created the vision for the center and serves as its founding director. The goals of the center include: 1. Develop antiracist research; 2. Foster authentic community engagement; 3. Develop education and training; 4. Change the narrative about race and racism; and 5. Serve as a trusted resource.

The Health Equity Work Group (HEWG) works to conduct, promote, and improve visibility to health equity research; strengthen collaborative efforts; create lasting partnerships with community-based organizations; and ensure SPH students and faculty work effectively in a diverse society. Each year, the HEWG establishes specific goals and formulates subcommittees to accomplish these tasks.

- Research & Training Subcommittee: This group promotes health equity research and health equity content in the curriculum to prepare students and faculty to work effectively in a diverse society. Our expertise in health disparities cuts across disciplines at the University. Committee members collaborate with community-based organizations on health disparities research, and work to ensure better integration of health equity issues throughout SPH curricula.
- Community Engagement Subcommittee: This group sponsors activities that increase awareness of strategies to reduce health inequalities and highlight University/community partnerships. As a cornerstone of their work, this committee organizes the annual Health Disparities Roundtable event. The roundtable—designed for health professionals, community members, students, and faculty concerned with reducing health disparities brings in national speakers to discuss emerging issues in health disparities research.
- Student Engagement Subcommittee: This group provides leadership opportunities for students to engage in health equity conversations and projects. Chiefly, the subcommittee aims to:
 - Connect students to community organizations engaged in health disparities related work.
 - Create spaces for dialogue regarding health disparities and diversity on campus.
 - Encourage the development of a diverse public health workforce.

Additional actions that create and maintain a culturally competent environment

• The 2020 fall orientation included a presentation on race, racism, and public health in Minnesota. The DEI director, recognizing a need for new students to be oriented into the school with a proper understanding of context, began creating the presentation in spring 2020. However, the urgency of the presentation increased even further after the murder of George Floyd coupled with calls for social justice and other summer 2020 events. In addition to highlighting the history of health inequities in Minnesota, the presentation also outlines school and University resources and action steps toward health equity and racial justice. Student evaluations indicate that the presentation was helpful, and we will continue to offer it at orientation.

- Shanda Hunt, our SPH dedicated librarian, has led the way in assisting and educating faculty in conducting antiracist research; she has developed and published an antiracist research guide (https://www.continuum.umn.edu/2021/02/an-anti-racism-lens/).
- Two new awards recognize faculty and staff who successfully champion diversity initiatives and promote the centrality of DEI to our mission:
 - Outstanding Health Equity Impact Award: This award will recognize a faculty member whose work has had a significant impact on health equity or community wellbeing at the local, national, or global level. The impact can be a single instance or collective impact over time. "Impact" will be broadly defined. Examples of impact may include, but are not limited to:
 - Demonstrating a high level of commitment to diversity in service, teaching, and scholarship;
 - Demonstrably improving the health of oppressed populations through the application of one's research, or through one's community service;
 - Changing the way that public health or health services are practiced or delivered through the influence of one's research;
 - Directly or indirectly influencing policy changes that can improve the public's health.
 - Diversity Equity and Inclusion Staff Champion Award: This award honors staff members who champion diversity and support SPH's commitment to be a powerful advocate for equity and justice not only in our school and on our campus, but also in higher education in general and in communities across the country. Nominees will demonstrate leadership in moving diversity, equity, and inclusion principles and practices forward within the School of Public Health. This may include, but is not limited to:
 - Exemplary leadership in, or commitment to advancing diversity, equity, and inclusion in our community with clear positive impacts in these areas.

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.

SPH tracks the racial and ethnic demographics of our students, staff, and faculty. Below, we review changes over time.

Student Demographics

The following graphs show our percentage of Black, NA/AI, Hispanic/Latino, Asian/Pacific Islander, and multi-racial applicants, enrollments, and graduates from 2011 – 2021. Even after years of intentional recruitment, our priority populations have not increased much. These data helped drive our effort to examine and improve the climate for students.





As shown in the Figure 1, over the past ten years, applications from students identifying as members of our priority populations, Black, NA/AI, and Hispanic/Latino have not changed much.



The graph above indicates that during the same ten-year period, enrollment for Black students, as well as Asian/Pacific Islander and Multi-racial students, shows a small, but promising upward trend. Our enrollment numbers for NA/AI and Hispanic/Latino students remain flat. The percentage of enrolled Asian/Pacific Islander students exceeds the percentage in the Minnesota population (6.9% vs. 5.2%), as does the percentage of multi-racial students (7.8% vs. 2.6%). By contrast, the percentage of enrolled students from our priority populations still remains below the percentage in the Minnesota population (Black 6.3% vs. 7.0%; NA/AI 0.5% vs. 1.4%; Hispanic/Latino 1.3% vs. 5.6%).





The graduation data shown above are similar to the enrollment data, indicating a slight trend upward for Black, Asian, and multi-racial students, but no positive change for NA/AI and Hispanic/Latino students.

Faculty & Staff Demographics

Faculty headcounts have held steady since 2015, while staff have lost 36 members, or approximately 10% percent of the full-time staff community. Our 2020 staff and faculty demographics reflect patterns similar to those in student data. Priority populations of Black, Indigenous, and Hispanic/Latino community members fall far short of state demographics and our own goals. These data support the need to re-examine our recruitment and hiring efforts, as detailed in the SPH Strategic Plan for Antiracism.





6) Provide student and faculty (and staff, if applicable) perceptions of the school's climate regarding diversity and cultural competence.

Ongoing climate assessments at our school are important for effective planning.

- UMN Employee Engagement Survey (alternate years)
- SPH Climate Assessment (new in fall 2020)
- SPH Student Engagement Survey (2019)

Please note: The SPH Student Engagement Survey has been paused since 2020 for revision because gradSERU, administered by the Graduate School, is very comprehensive. We are currently determining how to best use the SPH Student Engagement Survey in light of the many other surveys students complete.

Employee Engagement Survey

This 36-question survey evaluates two areas: commitment and dedication, and effective environment. Administered biennially at the University level, most recently in 2019, the survey was sent to 20,000 employees with response rates of 74% for the University overall, 85% for SPH faculty, and 80% for SPH staff. The University analyzes and shares the data with school leadership along with tools, suggestions, and resources for addressing identified issues.

Data from the 2019 survey showed that since 2015, faculty perception of commitment and dedication, as well as effective environment has improved. However, specific to commitment, faculty perception decreased slightly between 2017 and 2019, while increasingly slightly for effective environment in the same time period. Staff perception of effective environment also increased between 2015 and 2017, and again between 2017 and 2019, but decreased slightly for commitment between 2017 and 2019.



SPH Climate Survey

In fall 2020, SPH conducted the first ever climate assessment, which focused on race and racism within SPH. In total, 399 people participated in the survey. Another 20 participated in qualitative focus groups, and four completed 60-minute interviews.

The results—which highlighted important differences between how our white and BIPOC community members engage with SPH—undergirded the development and focus of the SPH Strategic Plan for Antiracism.

- Although a total of 84% of respondents answered positively to the statement "I feel like I belong at SPH," BIPOC students felt much less belonging, with only 67% either strongly agreeing or agreeing, and 33% either disagreeing (30%) or strongly disagreeing (3%).
 - Twice as many BIPOC community members disagreed with this statement than their white peers.
- 72% of BIPOC respondents disagreed/strongly disagreed with the statements:
 - "SPH prioritizes members from BIPOC communities in recruiting and hiring" and
 - "SPH prioritizes members from BIPOC communities in promotions and advancement opportunities."

Survey data from our 2019 SPH Student Engagement Survey reflected other concerns—including that students of color were experiencing challenges associated with their identities. In general, students expressed that using the word "diverse" without substantial action to create a welcoming and sensitive climate leads to great frustration among our priority populations. Students can feel uncomfortable when they experience faculty who do not know how to manage classroom discussions when other students make inappropriate or offensive comments. The students' comments underscore the importance of critically engaging with issues related to race, racism, and health disparities—and not just in the classroom, but throughout the total student experience.

Altogether, the survey indicated a need for us to provide a welcoming climate for all of our students, staff, and faculty, which in turn affects our recruitment and retention. This need is reflected in the goals of the SPH Strategic Plan for Antiracism.

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

Strengths

- Our renewed commitment to antiracism, as demonstrated by the development and implementation of the SPH Strategic Plan for Antiracism.
- The contribution and commitment of SPH Strategic Plan for Antiracism by faculty, staff, students, and alumni across SPH.
- The University provides myriad resources to support our antiracism efforts.
- New courses and revisions of existing courses reflect our commitment to cultural competence.

Weaknesses

- We have not increased enrollment and graduation rates among NA/AI and Hispanic/Latino populations.
- Our historical emphasis on recruiting people from our priority populations has only recently been supported by a clear initiative to improve SPH climate for these same populations.
- DEI training has historically happened outside of SPH. Expanding the resources for the DEI team would enhance our ability to offer more regular training that specifically focuses on developing SPH employees.

H1. Academic Advising

The school provides an accessible and supportive academic advising system for students. Each student has access, from the time of enrollment, to advisors who are actively engaged and knowledgeable about the school's curricula and about specific courses and programs of study. Qualified faculty and/or staff serve as advisors in monitoring student progress and identifying and supporting those who may experience difficulty in progressing through courses or completing other degree requirements. Orientation, including written guidance, is provided to all entering students.

1) Describe the school's academic advising services. If services differ by degree and/or concentration, a description should be provided for each public health degree offering.

The School of Public Health provides advising that promotes collaboration among students, staff, and faculty to enhance students' academic and professional development. The goal is to promote educational and experiential excellence that prepares students for successful careers improving the health of populations.

The associate dean for education and student engagement oversees the SPH student services center. The SPH student services center supports students in six areas: student recruitment and enrollment; diversity, equity and inclusion; career and professional development, applied practice experience; student engagement; and academic support. Prospective students are introduced to these areas as they inquire and meet with faculty/staff from their program of interest. Admitted students have the opportunity to learn more about academic support/advising by attending pre-matriculation events such as admitted student day where they can attend sessions offered by each degree program. These sessions provide a high-level overview of academic support and advising offered by the program.

Once a student has paid their enrollment deposit, they receive additional communication regarding these support areas including, prior to the start of the semester, a web-based orientation prep course and a school-wide orientation event, which includes their academic program orientation. Students are further introduced to advising models and support at their program orientations where they review academic requirements and advising expectations.

Faculty Advising

MPH students

- Each MPH program, including executive programs, has a program director who is a faculty member. The program directors play an overarching advisory role to MPH students because of their knowledge of school-wide and program specific requirements for the program of study, and their knowledge of important milestones in student progress. Furthermore, the program directors are all members of the SPH education policy committee (EPC). As members of the EPC, they are familiar with current educational policies and they participate in the development of SPH educational policy and decision-making.
- MPH students are also assigned a faculty advisor who serves as the academic advisor for the student. Academic advising includes guiding students on the following: coursework options, identifying an applied practice site, and selecting an Integrative Learning Experience (ILE) project. Depending on how student interests and experiences evolve, their ILE advisor may not be the same as their academic advisor. Most programs require that the ILE be reviewed and evaluated by both the ILE advisor and another faculty member. Depending on the project option selected, community health promotion, public health practice, public health nutrition, and maternal and child health require only the ILE faculty advisor to review and evaluate the ILE. Further ILE advising information is also found in the student guidebooks.
- Both faculty advisors and program directors support students who may experience difficulty in progressing through courses or completing other degree requirements.

 The faculty academic advisors for MPH students are primarily regular and term faculty (see definitions below). Adjunct or affiliate faculty, or sometimes community partners may serve as advisors or reviewers for ILE projects, with approval from the academic advisor or program director, when they can provide expertise that aligns with student interest that is outside of the expertise of regular and term faculty.

MS students

- Each MS program has a director of graduate studies (DGS) who is a faculty member. The DGS plays an overarching advisory role because of their knowledge of University, SPH, and program specific requirements, and their knowledge of important milestones in student progress. Some milestones, such as selection of an examination committee and application for advanced master's status, require formal DGS approval. Furthermore, DGS' are all members of the SPH education policy committee (EPC). As members of the EPC, they are familiar with current educational policies and participate in the development of SPH educational policy and decision-making. They also attend meetings organized by the dean of the graduate school to keep current with graduate school policies, which govern the MS degree programs.
- MS students are assigned a faculty advisor who serves as the academic advisor for the student. Academic advising includes guiding students on coursework options and identifying a research project. Depending on how student interests and experiences evolve, their master's project advisor may not be the same as their academic advisor. Faculty advisors for MS students must have a graduate faculty appointment in their graduate program. Please see the Electronic Resource File, Criterion H folder, H1.1 subfolder for definitions.

PhD students

- Each PhD program has a director of graduate studies (DGS) who is a faculty member. The DGS plays an overarching advisory role because of their knowledge of University, SPH, and program specific requirements, and their knowledge of important milestones in student progress. Some milestones, such as selection of the examination committees and application for advanced doctoral status, require formal DGS approval. Furthermore, DGS' are all members of the SPH education policy committee (EPC). As members of the EPC, they are familiar with current educational policies and participate in the development of SPH educational policy and decision-making. They also attend meetings organized by the dean of the graduate school, so that they keep current with graduate school policies, which govern the PhD degree programs.
- PhD students are typically matched with an advisor based on the alignment of research interests and the availability of funding. The academic advisor is also the dissertation/research advisor. In the case of biostatistics, PhD students are assigned an academic advisor and then select their dissertation/research advisor based on mutual research interests. The primary role of the PhD advisor is to guide the student as they prepare for the written and oral preliminary exams, conduct their dissertation committee and dissertation committee may also act as informal advisors to help guide the student as they conduct their research. Faculty advisors for PhD students must have a graduate faculty appointment in the graduate program. Please see the Electronic Resource File, Criterion H folder, H1.1 subfolder for definitions.

Staff Advising

• Each division employs at least one member of the student services staff, referred to as program coordinators. Program coordinators advise students on administrative processes, which include course planning and scheduling, policies, procedures, and degree-planning benchmarks for both SPH and the university. SPH student services also includes the director of academic and student affairs, who serves as the SPH registrar. The registrar monitors student progress and identifies students who may experience difficulty in progressing through courses or completing other degree requirements. The registrar alerts the associate dean of education and student engagement, the program directors, DGS', and program coordinators about students who may

need to be put on academic probation or be dismissed from the program. The program coordinators work together with the DGS/program directors and faculty advisors to support students who may experience difficulty in progressing through courses or completing other degree requirements.

• Student services staff who participate in advising students and monitoring their progress attend a monthly coordinator council meeting to keep current on SPH policy and practices. They also have a representative who attends the monthly EPC meetings to keep current on educational policy and provide feedback for policy development. Student services staff can also participate in the graduate program coordinator (GPC) network, which is a forum that facilitates the sharing of best practices, knowledge, and skill development across the university.

2) Explain how advisors are selected and oriented to their roles and responsibilities.

Faculty Advisors

Programs select faculty advisors for MPH and MS students; they are typically selected to align with student interests, experiences, and expertise. Faculty advisor selection typically takes place after admission. Depending on how student interests and experiences evolve, the student in consultation with the academic advisory may select an ILE advisor or MS project advisor who is different from the academic advisor. MPH students select their faculty reviewers for their ILE projects, and MS students select their examination committee members in consultation with their academic and research advisors. MPH students enroll in a course associated with the ILE or master's project, respectively. Their research advisor serves as the instructor for that course.

Programs typically select faculty advisors for PhD students before admission to make sure that the faculty advisor's research aligns with student interest, and funding is available. In the case of Biostatistics, students select their faculty research advisors after they begin their program of study based on mutual research interests. Faculty advisors for PhD students serve as the instructor for the course associated with dissertation research.

All faculty advisors are oriented to their roles and responsibilities by program directors, DGS', and peer faculty. They are also provided with a guidebook the clearly outlines all educational policies and procedures and that relate to student success, as well as information on the curriculum and milestones. Faculty advisors are also oriented toward important faculty advising resources that are provided by the graduate school: <u>https://grad.umn.edu/faculty-advising-resources</u> and the Student Conflict Resolution Center: <u>http://sos.umn.edu/resources-dignity-project</u>. These websites include resources on best advising and mentoring practices and guides for graduate and professional student advising.

Staff Advisors

- Staff advisors are selected based on their education and professional experience. They typically hold a master's degree or a bachelor's degree with several years of student services work experience. They understand the complex SPH and university systems and are skilled at trouble shooting and problem solving. They are also selected based on excellent communication, counseling, and interpersonal skills, and a demonstrated ability to work with people from a broad range of cultural backgrounds.
- Staff advisors work closely with program coordinators, DGS', and faculty advisors. They participate attend a monthly coordinator council meeting to keep current on SPH policy and best practices. They also have a representative who attends the monthly EPC meetings to keep current on educational policy and provide feedback for policy development. Student services staff also participate in the graduate program coordinator (GPC) network, which is a forum that facilitates the sharing of best practices, knowledge, and skill development across the university.
- 3) Provide a sample of advising materials and resources, such as student handbooks and plans of study, which provide additional guidance to students.

All students receive a guidebook upon admission as a resource for their time in the program. The guidebooks are divided into two sections: SPH and program-specific. The SPH section provides students with school level information on advising resources, policies and procedures, and referral/additional guidance information. The second half of the guidebook contains program-specific information such as curriculum, procedures, details on Applied Practice Experiences and Integrative Learning Experience requirements, and master's and/or doctoral degree information. Each guidebook is developed with an appendix that includes CEPH foundational competencies, program-specific competencies, faculty list, forms, and other additional required information to help students with their compliance and success.

Student Guidebooks are updated annually and can be found on the SPH website at https://www.sph.umn.edu/current/resources/guidebooks/, as well as within the Electronic Resource File Criterion H folder, H1.3 subfolder.

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.

Satisfaction with academic advising is assessed through a variety of methods and varies depending on the year. Each year SPH administers the Annual Student Engagement Survey (ASES) to all students in the spring semester in order to gather feedback on the overall student experience. This survey was paused in spring 2020 and 2021 due to overlap in timing with, and an increased campus effort to enhance response rates for, the gradSERU. See tables 1-3 below for specific results from the surveys regarding student satisfaction with academic advising.

On the whole, SPH students are satisfied with academic advising. The 2018 and 2019 ASES surveys asked the question "Overall, how satisfied are you with the academic advising you have received from SPH faculty?" For both years, over 70% of students reported being either very satisfied or satisfied with their academic advising experiences.

Question: Overall, how satisfied are you with the academic advising you have received from SPH faculty?							
Term	N	Response Rate	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
2019	214	93.8%	38.0%	36.5%	12.6%	9.4%	3.7%
2018	168	100%	27.4%	44.1%	12.5%	11.9%	4.2%

Table 1: SPH Annual Student Engagement Survey (ASES)

Qualitative responses from the 2019 ASES show that those who had positive academic advising experiences had an advisor who was well matched to their experiences, accessible, and invested in their overall success. Those who had more negative experiences cited poor advising assignments, confusion in understanding the faculty advisor's role compared to the program coordinators, accessibility of the advisor, and the lack of knowledge faculty had regarding degree requirements.

As a large research institution, the Graduate Survey in the Research Institution (gradSERU) is administered at the University of Minnesota every other spring semester to graduate and professional students; this survey occurred in spring of 2019, 2020 (COVID-specific) and 2021.

- Recent response rates for SPH participation in the gradSERU survey are:
 - o 2021 48.0% (473 of 985),
 - 2019 38.2% (372 of 973).

The 2019 gradSERU advising questions also show positive responses; SPH students responded positively to the relational aspect of the advising process where they felt respected by their advisor (96%), their advisor considered their personal abilities and talents (89%), and was effectively able to help them (84%). Students responded less favorably to questions about areas generally outside the scope of the academic advisor's role, such as future career assistance (78%) and finding financial support (36%). The SPH and university provide many other resources that students can leverage to receive support in these areas.

Additionally, students responded positively to the help they received related to completing degree requirements such as dissertation defense or final oral qualifying exam (78%), dissertation/thesis research (76%) and writing/revising dissertation/thesis (76%). Areas where there was less satisfaction were in writing grants/contract proposals (51%) and finding research or studying in other countries (46%). These are areas that can be specific to student's specific interest.

The 2021 gradSERU data shows even higher rates of positive responses. This may explained in part by a change in sampling for questions related to advising. In 2021, the graduate school decided to only ask MS and PhD students the advising questions. This explains the lower number of students who responded. It may also explain the higher rates of positive responses because PhD students typically have a different type of relationship with their advisors due to the nature of guiding research and the greater period of time spent in graduate school as compared to students in an MPH program. Furthermore, most PhD students receive full funding which may influence satisfaction.

Question	Statement	N	Strongly Agree / Agree	N	Strongly Agree / Agree
		2	2019	20	021
	My advisor respects me as an individual.	295	96%	129	98%
To what extent do	My advisor considers my personal abilities and talents.	281	89%	129	94%
you agree/disagree with the following	My advisor is able to effectively help me.	294	84%	130	92%
statements concerning your current, primary advisor?	My advisor has time for me when I need help or advice.	288	83%	129	93%
	My advisor provides me with information that helps me think about my future career.	288	78%	129	86%
	My advisor helps me get financial support.	214	32%	103	81%
	Dissertation defense or final oral qualifying exam.	83	78%	32	91%
How helpful was the guidance you received from your current, primary	My dissertation/thesis research.	145	76%	73	88%
	My dissertation/thesis writing/revisions.	108	76%	58	86%
advisor in each of these areas?	Writing grants and contract proposals.	100	51%	Not Available	Not Available
	Researching or studying in other countries.	81	46%	Not Available	Not Available

Table 2: gradSERU 2019 & 2021

Responses indicate that some students identified particular aspects of advising as obstacles in their degree progress. Advising obstacles decreased from 2019 to 2021.

Question Statement		N 2	Strongly Agree / Agree 2019	N 2	Strongly Agree / Agree 021
Rate the extent to which the following	Inadequate advising.	234	25%	128	20%
an obstacle to your degree progress.	Poor relationship with my advisor.	223	18%	128	13%

Table 3: gradSERU – Obstacles to Completion

The 2020 gradSERU was a shortened survey designed primarily in response to the COVID-19 pandemic; here only 12% indicated that a lack of access to an academic advisor presented an obstacle to a successful transition to online learning (n=256).

In summary, students are generally satisfied with their academic advising and have adequate access to their advisors who treat them respectfully and are invested in their success; however there is room for improvement to ensure faculty advisors roles are clear to both the student and faculty member, properly trained and informed on degree requirements and processes, and accessible to students so they can be responsive to individual student situations.

The data from gradSERU provide an excellent starting point in determining how best engage students, in addition to surveys, in discussions about the strengths of advising and areas for growth.

5) Describe the orientation processes. If these differ by degree and/or concentration, provide a brief overview of each.

All SPH students are invited to attend new student orientation approximately two weeks prior to the start of the fall semester. This program is coordinated by SPH student services under the leadership of the assistant dean for enrolled student experience and in coordination with a small planning team with representation from each division, SPH communications, the dean's office, and the SPH student senate. The orientation experience is evaluated annually by student participants (see the <u>fall 2020</u> and <u>fall 2021</u> orientation summaries). The 2021 summary report can also be found in the Electronic Resource File, Criterion H folder, H1.5 subfolder.

Given the inability to gather in person during fall 2020 due to COVID-19, we developed an online orientation course. Our online course included all content previously offered via in-person orientations, along with additional resources and complementary virtual sessions wherein students could engage with peers and other SPH leadership in advance of the start of the semester. Some examples of virtual sessions include health sciences library introduction, career services workshops, affinity group hangouts, meet & greet with the dean, doctoral student welcome, and a peer mentor program information session.

Each academic program also hosts an orientation session to complement the school-wide experience. We provide an overview of these programmatic orientations below. Students admitted in spring and summer terms—when enrollment numbers are small—do not attend a school-wide orientation. Instead, they receive orientation directly from their programs. Programs can also leverage central SPH student services as a resource to students as they begin their academic experience.

In order to continue to provide flexibility and accessibility to students entering in fall 2021, all four of these components (online orientation, in-person event, academic program orientation and engagement opportunities) were offered in summer 2021 through the start of the fall semester. The traditional in person event was modified to be a hybrid (in person and virtual) event and included students who started in fall 2020 because they did not have an opportunity to gather on campus when they started in SPH.

Engagement opportunities were offered in both in person and virtual or hybrid formats. When possible, they were recorded and posted for students to access and refer to after the start of the semester.

International students receive additional onboarding experiences through the office of International Student & Scholar Services (ISSS). ISSS hosts Global Gopher Events two weeks leading up to the start of the semester to allow international students to adjust to the U.S. and learn more about U.S. culture and Minnesota customs. We promote these opportunities and coordinate SPH orientation to avoid conflicting with them.

Please find more information on our individual academic program orientations in the Electronic Resource File, Criterion H folder, H1.5 subfolder.

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

Strengths

- The online orientation course that was developed for fall 2020 orientation will be available and accessible for students admitted to any term. This course provides a solid foundation of resources and support for students to refer to at any time.
- Shifting the orientation program from in-person to remote also created an opportunity to expand content, which can continue to be further expanded moving forward in order to provide a more robust and consistent onboarding experience for students to build stronger connections across SPH.
- Our model of collaborative faculty and staff advising provides students with a variety of advising services and personnel who can focus on specific areas of student need while providing individualized attention.

Weaknesses

- We are working on improving communications for incoming students so they understand all requirements in advance of starting their academic program and to stay informed of opportunities and resources available to them.
- We are developing a clearer communication strategy for SPH students—one that makes information more accessible on the SPH website, including timely reminders to meet key deadlines, and streamlined methods for receiving career, Applied Practice Experiences and engagement opportunities.
- We would benefit from a consistent process for orienting new faculty advisors.

H2. Career Advising

The school provides accessible and supportive career advising services for students. Each student, including those who may be currently employed, has access to qualified faculty and/or staff who are actively engaged, knowledgeable about the workforce and sensitive to his or her professional development needs and can provide appropriate career placement advice. Career advising services may take a variety of forms, including but not limited to individualized consultations, resume workshops, mock interviews, career fairs, professional panels, networking events, employer presentations and online job databases.

The school provides such resources for both currently enrolled students and alumni. The school may accomplish this through a variety of formal or informal mechanisms including connecting graduates with professional associations, making faculty and other alumni available for networking and advice, etc.

Career & Professional Development Center

Public health spans many disciplines and career opportunities. We support the drive to succeed among our students and alumni through our award-winning School of Public Health Career & Professional Development Center. The center offers guidance and resources needed to understand the professional marketplace and launch a public health career. Additionally, the center maintains close relationships with the Minnesota Department of Health and hundreds of nonprofit organizations, corporations, and leading healthcare organizations. These relationships support ongoing opportunities for real-world experiences, industry expertise, mentorship, and career development. Below is our strategic framework, which includes the center's mission, vision, values, and strategy.

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.

We first introduce students to our center via emails, mailings, and other recruitment materials sent through the school's Office of Admissions and Enrollment Management. We also showcase the work of the center during our Maroon, Gold, and Me event for students who were admitted, but have not matriculated. In addition, we host an hour-long orientation session for matriculated students interested in learning more about our center and its offerings. Meanwhile, we encourage SPH alumni to attend our monthly career transitions "drop-ins."

Each career advisor with the center serves as a liaison to two of our four divisions. Although often roles overlap, the center's director works primarily with two divisions, the Division of Biostatistics and the Division of Epidemiology and Community Health; while the associate director most often works with the Division of Health Policy Management and the Division of Environmental Health. This allows for a deep understanding of divisions and programs over time, as well as strong, trusted relationships and service evolution as desired. As designated liaisons, career advisors partner with program directors to plan and develop specific programming, resources, and/or services to best meet the needs of their students and alumni.

CAREER & PROFESSIONAL DEVELOPMENT CENTER



Mission (why we exist)

We believe that every individual has unique potential and should have the opportunity to pursue a meaningful and fulfilling career.



The Career & Professional Development Center provides all SPH students and alumni with necessary career tools and resources beginning when they first matriculate and continuing as they become established public health professionals. These services and resources include:

- One-on-one career advising appointments (30 or 60 minutes long). We began using Zoom for individual appointments and drop-in hours in February 2020.
- Drop-in hours (1.5 hours/day, four days/week).
- Workshops/programming on a variety of career and professional development topics (in-person and webinar-based delivery).
- Classroom presentations.
- PubH 6135: Job Search Strategies and Career Professional Development, offered fall and spring.
- Online/web-based tools and resources (<u>http://www.sph.umn.edu/current/careers</u>).

- Social media platforms for sharing information, including <u>Career Blogs</u>, <u>LinkedIn</u>, Facebook, and the SPH Student SPHere (newsletter sent once per week to students, faculty, and staff of SPH)
- SPH Job Board: <u>https://jobs.ahc.umn.edu/sph.</u>
- Employer engagement (i.e., information sessions, co-presenting workshops, career fairs, site visits, etc.). These engagements include local, regional, national, and international organizations representing all industries (i.e., private, government, public, academia, NGO or nonprofit).
- Events: On-campus interviewing, Career Connect (SPH career fair), University at-large career related events or workshops, professional development workshop series sponsored SPH's student senate.

The following topics are addressed by career advisors through the aforementioned services:

<u>Career Development:</u> self-assessment (i.e. strengths, interests, personality) | resumes, CV's, and cover letters | networking strategies | informational interviews | personal branding | job searching | interviewing | negotiation strategies | advanced education | personal statements

<u>Professional Development:</u> communication skills (i.e. presentation, writing, interpersonal) | leadership and team development | conflict and stress management | work/life balance | professional etiquette | emotional intelligence (EQ) | managing up | decision making | career and time management | cultural awareness | generation topics| conference preparation

The following tables describe the volume and type of student contacts from the past three calendar years.

Type of Student Contacts	2018 (Total N = 3615)	2019 (Total N = 2300)	2020 (Total N = 1295)
One-on-One Counseling Appointments	2222 (61.8%)	1448 (62.9%)	695 (53.7%)
Drop-in Hours	58 (1.6%)	57 (2.4%)	38 (2.9%)
Email Consults	1173 (32.7%)	672 (29.3%)	270 (20.9%)
Workshop/Event Attendance	142 (3.9%)	123 (5.4%)	292 (22.5%)

Table H2.1: Type of Student Contacts by Year, Number & Percent of Total Contacts

Table H2.2: Purpose of Student Contacts by Year, Number & Percent of Total Contacts

Purpose of Student Contacts	2018 (Total N = 1726)	2019 (Total N = 1554)	2020 (Total N = 1168)
No Purpose Indicated	236 (13.6%)	17 (1.0%)	14 (1.1%)
APEx/Field Experience (Domestic)	63 (3.6%)	54 (3.4%)	48 (4.1%)
APEx/Field Experience (International)	7 (0.4%)	6 (0.3%)	3 (0.2%)
Alumni	18 (1.0%)	7 (0.4%)	14 (1.1%)

Purpose of Student Contacts	2018 (Total N = 1726)	2019 (Total N = 1554)	2020 (Total N = 1168)
Career Exploration	32 (1.8%)	24 (1.5%)	30 (2.5%)
Career Goals & Planning	72 (4.1%)	80 (5.1%)	50 (4.2%)
Communication Skills	4 (0.2%)	5 (0.3%)	1 (0.08%)
Conference Preparation	1 (0.05%)	5 (0.3%)	1 (0.08%)
Conflict Management	7 (0.4%)	10 (0.6%)	10 (0.8%)
Decision Making	1 (0.05%)	0 (0.0%)	1 (0.08%)
Fellowships (MHA Only)	44 (2.5%)	45 (2.8%)	44 (3.7%)
Graduate Assistantships	12 (0.6%)	11 (0.7%)	3 (0.2%)
Graduate School Planning	34 (1.9%)	17 (1.0%)	15 (1.2%)
Internships (Non-MPH)	12 (0.6%)	6 (0.3%)	8 (0.6%)
Interview Preparation	179 (10.3%)	167 (10.7%)	140 (11.9%)
Job Searching	186 (10.7%)	205 (13.1%)	147 (12.5%)
Leadership & Team Development	1 (0.05%)	4 (0.2%)	2 (0.1%)
Managing Up	0 (0.0%)	0 (0.0%)	1 (0.08%)
Medical School Preparation	20 (1.1%)	22 (1.4%)	11 (0.9%)
Networking	86 (4.9%)	98 (6.3%)	101 (8.6%)
New Job Transition	23 (1.3%)	25 (1.6%)	15 (1.2%)
Other	32 (1.8%)	34 (2.1%)	26 (2.2%)
Personal Branding	9 (0.5%)	4 (0.2%)	5 (0.4%)
Personal Statements/Essays	90 (5.2%)	89 (5.7%)	46 (3.9%)
Professional Development	1 (0.05%)	8 (0.5%)	6 (0.5%)
Residencies (MHA Only)	37 (2.1%)	34 (2.1%)	30 (2.5%)
Resumes/CV's/Cover Letters	407 (23.5%)	426 (27.4%)	256 (21.9%)
Salary/Offer Negotiation	50 (2.8%)	64 (4.1%)	60 (5.1%)
Scholarships/Funding Resources	1 (0.05%)	4 (0.2%)	2 (0.1%)
Self-Assessments	4 (0.2%)	12 (0.7%)	8 (0.6%)
Social Media (i.e., LinkedIn)	25 (1.4%)	36 (2.3%)	35 (2.9%)

Purpose of Student Contacts	2018 (Total N = 1726)	2019 (Total N = 1554)	2020 (Total N = 1168)
Time Management	0 (0.0%)	2 (0.1%)	0 (0.0%)
Volunteering	3 (0.1%)	1 (0.06%)	0 (0.0%)
Well-Being	16 (0.9%)	32 (2.0%)	35 (2.9%)

The above **bold** topics and percentages indicate the top five most requested areas of student assistance.

2) Explain how individuals providing career advising are selected and oriented to their roles and responsibilities.

Counselors in our Career and Professional Development Center are responsible for counseling and assisting students and alumni in career planning and development, as well as preparing for employment and/or graduate school programs. Our career advising staff have graduate-level degrees in human resource development, higher education administration with a focus on career development. Advisors are expected to have a minimum of three to five years of experience in career or professional development or academia working directly with students, and/or career advising and counseling experience. The onboarding process of the career advisors includes staff and faculty meetings/introductions, network meetings, conversations with senior administration and academic program leadership, shared UMN and SPH resources, and meetings with human resources representatives.

Counselors are trained to provide the full-range of career counseling services and provide expertise in specific areas, develop guidelines and procedures to improve efficiency, and serve as leaders within the SPH and liaisons with employers.

Please find brief position descriptions and more in-depth job responsibilities in the Electronic Resource File, Criterion H folder, H2 subfolder.

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 Examples (2018-2020)

- A second-year MPH (epidemiology) student scheduled a 1:1 career advising appointment to discuss her interest in applying for the CDC/CSTE Applied Epidemiology Fellowship, as well as how to strengthen her application. The career advisor focused first on why the student was interested in applying and how it related to her short- and long-term career goals. Second, the advisor discussed how to draw from her master resume to create a tailored/customized resume. Lastly, the advisor shared strategies, tips, and resources for writing a statement of purpose for the fellowship application. Following two additional 1:1 sessions that included application review and interview prep, the student was offered the fellowship.
- A second-year MPH (public health and administration) student scheduled a 1:1 career advising
 appointment to discuss his interest in medical school. The student indicated in the appointment
 request that he had previously applied three years in a row and was unsuccessful. During the first
 session, the career advisor reviewed the student's most recent application materials and shared
 feedback and strategies for improving his primary application and list of activities (including activity
 descriptions), potential courses to retake, and most importantly, ideas for strengthening his personal
 statement. Following several additional sessions that included primary application reviews, the career
 advisor continued to meet with the student regarding their secondary application, which included
 essay responses. The student ultimately applied for eight medical school programs, seven of which

invited him to interview. The career advisor then met with the student to support his preparation for these interviews. Following many practice sessions, the student completed the seven interviews was offered admission by five programs. He ultimately chose his dream school, the University of Minnesota Medical School, and is currently in his third year.

- A first-year MPH (maternal and child health) student scheduled a 1:1 career advising appointment to discuss potential field experience (now called APEx) opportunities within 20 miles of her rural home town. Understanding the challenges this presented, she was afraid she would not be able to meet the field experience requirement. The career advisor began by addressing the student's fears and offering reassurance about finding a field experience. To guide the search, the advisor then queried the student about her interests and career goals, as well as details pertaining to her geographical limitations (which were based on a need to help care for her mother, who was battling stage 4 breast cancer). After identifying potential options, the career advisor again met with the student to share tips and strategies both for employer outreach and inquiring about a potential field experience opportunity. The student secured a field experience at a local county health department just two miles from her home.
- A 2015 alumnus of the Public Health Administration and Policy (PHAP) reached out via phone in 2018, three years after graduating with her MPH degree, indicating she would like to make a 180degree career change. Her exact words were, "I woke up this morning and decided I can't do this type of work anymore, I want something new." After an hour-long phone conversation, it was determined that she wanted to transition from public health policy and analysis work to developing cross-fit programs for youth in schools. After some quick research the career advisor identified one school in the entire country that offered such a program for youth in schools: a school district in San Diego, California. About a week after the conversation, she had planned a trip to San Diego to meet with the cross-fit youth program team. Prior to her departure we discussed a strategy on how best to approach the conversation. Jump ahead another week and we were again back on the phone discussing her meeting on how she could begin to build a similar team back in Minnesota. The career advisor provided strategies, tips, resources, and some direct contacts for her to consider. After about a month of applying these suggestions, she was able to develop a team and began putting together a business plan for her cross-fit youth program, shared it with multiple school districts in Minnesota, and was excited to report that three districts had approved/accepted her proposal. Today, her program is implemented in twelve school districts across Minnesota, and she is loving her new career.

In addition to offering one-on-one career counseling to SPH alumni, the Career and Professional Development Center and the SPH Alumni Relations Office co-created "SPH Career Transitions Network" to occur virtually every second Wednesday of the month. Each session is confidential and minimally structured to provide time for conversations regarding each attendee's transition needs. The Career Transitions Network is free and open only to SPH graduates (any degree or certificate program) who are considering a current or future career transition. All conversations are confidential. Topics have included how to conduct a successful job search, networking strategies, negotiation, and successful career and professional management. Attendance has ranged from one to eight alumni logging in from various states such as Minnesota, Massachusetts, California, Washington, Wisconsin, and Georgia.

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.
Student Satisfaction with Career Advising Appointments	2018 (Total N = 246)	2019 (Total N = 154)	2020* (Total N = 8)
Very Satisfied	225 (91.5%)	140 (90.9%)	7 (87.5%)
Satisfied	19 (7.7%)	11 (7.1%)	1 (12.5%)
Neither Satisfied nor Dissatisfied	1 (0.40%)	2 (1.30%)	0 (0.0%)
Dissatisfied	1 (0.40%)	1 (0.7%)	0 (0.0%)
Total Reporting as Satisfied & Very Satisfied	244 (99.2%)	151 (98.1%)	8 (100%)

Table 3: Student Satisfaction by Year, Number & Percent of Total Contacts

* Satisfaction rates for 2018 & 2019 were collected through the APLUS tracking system, through which a short survey is sent to each student after their engagement with the center to measure their level of satisfaction.

In 2020, the Career and Professional Development Center decided to temporarily postpone the use of APLUS for appointment scheduling and student satisfaction surveying due to working 100% virtually as a result of the COVID-19 pandemic. Instead, we determined 2020 satisfaction rates through two focus groups. The focus groups were held in July 2020 and attended by both current and former students that spanned all our degrees and programs. The groups were facilitated by the director and associate director of the center, and notes were taken and cleaned after the conclusion of each group. Themes emerged with a selection of responses outlined below. All notes and focus group responses can be found in the Electronic Resource File, within the Criterion H folder, H2.4 subfolder.

2020 Focus Group Questions and Sample Responses Responses have been abridged and edited for clarity.

How would you describe your experience with Career Services?

- Overall: Very satisfied, high quality, among the best
- I've utilized career services at multiple institutions, and the Career and Professional Development Center is second to none

1. What did you find most helpful?

- Very realistic, honest answers even if it is controversial or dramatic; brought great insight from past students and what he's seen happen, but doesn't say this is for sure what will happen.
- The center provided great resources and connections within the field of public health.
- Counselors helped articulate values and areas of interest, then connected students to people in organizations that would fulfill those values and interests.
- Counselors are able to listen to the issues students come in with, help figure out what their true needs are, and provide key takeaways and additional resources.

2. What could be improved?

- To better meet student demand for the center's services, consider building a virtual library or easy to access short videos (the nuts and bolts of a topic).
- More samples and examples (resumes, statements, etc.).
- Students wished for a way to connect peer to peer, such as speaking with people a year older that have been in their shoes and share things they have learned when it comes to resumes or what questions they should prepare for interviews (almost like a student mentor).

- Making more time for 1-on-1s.
- 3. When comparing your appointment experience pre-COVID versus COVID (via Zoom), how would you express the quality of the services provided?

Pre-COVID

- Meeting regularly.
- Needs were different prior to COVID.
- Felt it was easier to refer people pre-COVID.

<u>COVID</u>

- Meetings were just as genuine.
- The transition felt seamless.
- Zoom versions were better in some ways because people were able to schedule meetings at more convenient times, as well as counselors using the share screen feature to talk through documents and examples. Plus, no driving, parking, etc.
- During a staff absence there was a lack of communication with students. One student reported emailing the staff member three times and didn't receive even an automatic response or anything until five months later.
- 4. What additional services and/or resources would you recommend we include during these virtual times (during the pandemic)?
 - Reach out to each program specifically.
 - Provide students with a summary email after the session with key points and helpful links.

5. Would you recommend our services, and why or why not?

- Yes, 100% (8 participants).
- 6. The Career Center staff includes two Mental Health Advocates. Do or did you feel supported with regards to your mental health, and in what ways? Suggestions?
 - Counselors saw us each as a human being, rather than just another person they needed to help for their job.
 - Counselors are able to see beyond what is going on (e.g., it's more than a resume, ability to ask deeper questions and dig a little deeper).
 - Although students said they don't need a therapist, it's nice to have mental health as a pillar of their approach.

7. One of the core values of the Center is diversity. Do or did you feel supported with regards to equity, diversity, and inclusion, and in what ways? Suggestions?

- Career services made the experience feel comfortable and built community.
- Counselors wouldn't recommend employers that didn't fit your values, diversity needs, etc.

Selected Student Testimonials

The following selection of student testimonials come from two sources: qualitative data from the 2018 - 2019 APLUS survey, and unsolicited follow-up emails from students over the course of 2020. This qualitative data is tracked and utilized in a variety of different ways including: marketing, promotions and recruitment purposes, website text, and is inserted into presentations. Responses have been abridged and edited for clarity. The full scope of testimonials can be found in the Electronic Resource File, within the Criterion H folder, H2.4 subfolder.

"Thank you for giving me such great advice yesterday! I've started scoping out 'the scene' on LinkedIn for governmental and nonprofit jobs, and I'm aiming to email my former professor today to ask him about his day-to-day work. This new process already feels a lot more grounding and productive than the 'conventional' job search, and I appreciate that you proposed it to me. The pandemic and US political crisis had made me a little uncertain and pessimistic about my future, but I now feel a lot better focusing on the things I have control over re: my career and my future in general."

"Turns out that networking is incredibly helpful, and through a chance conversation with my primary doctor I learned about a position in the health system where I've been working for the last fifteen years. Starting last week, I began working as a clinical research nurse in infectious disease research through Allina Health."

"No need to respond, but I'm writing to express my positive experience with the School of Public Health's Career & Professional Development Center. As an alumnus, I utilized these services three different times throughout my job search. I first contacted Career Services back in April when I started to search. They helped me perfect my CV and cover letter, but encouraged me to spend most of my time networking and gave me tools to do so. This proved to be great advice because many of the jobs I was interested in, including the one I was offered, were not posted. Upon landing several interviews, I again contacted Career Services and they helped me groom my interview skills. When I received a job offer, we once again connected to discuss a strategy for negotiation, which resulted in an intellectually stimulating job with good paid time off, a good salary, and flexibility over my schedule. Ultimately, my job search was a success story that the Career & Professional Development Center helped write. Thanks for your support of these services."

"I hope all is well with you in the tumultuous 2020 we are living through. I was catching up with some of my fellow MHA peers this weekend and I was reflecting on how you were truly the singular most helpful person to me during my time at the MHA program."

"I got both the EIS and NCI fellowships which was super exciting and I just decided to go with the NCI fellowship. I absolutely would not have done it without your help and encouragement. The mock interview call we did was just so helpful not just during the interview but afterward while I was making a decision. Thank you for making time, being so encouraging, and connecting me with people. I am so grateful for everything."

"I wanted to thank you for all of your advice and practice sessions in your office. You gave me a great deal of confidence and preparation materials for the fellowship season and it was much appreciated. It was much more successful than I had thought it would be with offers from UT South Western, Mayo Clinic, and Kaiser Southern California. You were a great advisor to me and, I know, to many of my classmates. Thank you again!"

"I got an internship for this summer in the Supervision & Regulation Division of the Federal Reserve doing Analytics. Each of you was very helpful in this process by sending job leads, helping me polish my resume, and sharing interview tips. I just wanted to say thanks for all you do for students and the support you've given me."

"Thank you for your support over the past two years. You were instrumental in my receiving in-state tuition, and then you issued me a challenge (for a free book) during my first week on campus. As I finish up my graduate education, your book is sitting on my desk and is a reference as I assemble job applications. Every meeting or lecture I had with you was exciting, I left feeling empowered. Thank you for believing in me. Thank you for believing in the Senate. You taught me a lot about myself, professionalism, and leadership. You are a truly amazing individual and I hope to see you down the road at school or alumni events."

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

Strengths

Our greatest career advising strength may be our more than 40 combined years of experience as career practitioners. In addition, our approach to advising-drawing from our strategic framework (see above)-relies on a developmental mindset and evidence-based strategies. We are empathetic toward and inclusive of all students and alumni. We are extremely resourceful and take pride in collaborating with faculty, staff, and cross-disciplinary programs/schools across the University to deliver the highest quality content and programming. We are also very engaged in our profession as career practitioners, serving as presenters and as local and national leaders while staying current with current industry and employment trends. While 2020 brought many challenges to our work and service delivery, our flexibility and adaptability allowed us to smoothly transition from in-person to virtual services. Also, the career practitioners in the center are both trained as mental health advocates and hold the highest level certifications from the University's Office of Equity, Diversity, and Inclusion. Proudly, our center was recognized by the University's Career Development Network for integrating equity and diversity into who we are and what we offer. Lastly, our center provides internship opportunities to undergraduate students in human resource development, offering valuable experience and skill acquisition through project-based work, while assisting with the center's strategic initiatives/career efforts.

Weaknesses

- Reflecting on the past three years, the Career and Professional Development Center has identified the following weaknesses (areas of growth potential):
 - Compared to our public health colleagues from other competitive institutions, the student to counselor ratio is among the highest across schools of public health (estimated 800 students per career advisor). This does not include the number of alumni we also serve.
 - Improvement Strategies: Starting in early 2020, our center began, in response to the challenges of the COVID-19 pandemic, offering drop-in hours (four days/week, 1.5 hours/day). We made this decision based on the success of our 2018 and 2019 initiative, "Career Doctors," a weekly opportunity for students to stop into the student lounge to ask (and receive answers to) their career questions. Furthermore, we are auditing our center's website with the goal of strengthening our online resources and presence. These resources include multimedia resources, a video library, podcast episodes, data visualizations about where our graduates work (along with salary information), and learning modules focused on career and professional development topics.
 - Improvement Strategies: Starting fall 2020, the center developed, promoted, and offered programming throughout the fall and spring semester. The programming included presentations on various career development topics in order to advise groups of students all at once.
 - Similarly, we now offer life-long career services for alumni, despite not having a dedicated alumni advisor.
 - Improvement Strategies: To accommodate the need to fully serve alumni, we began collaborating with the SPH Alumni Relations team, we provide monthly alumni Career Network meetings during the lunch hour to offer career advising assistance in a group environment. Most alumni attended via web or phone. In addition, to strengthen our alumni career resources, we now offer alumni-specific webinars on our center's website, encouraging them to engage with SPH's and UMN's alumni associations and their resources.
 - We hope to regain strength in employer relations. Prior to 2018, we had a full-time employer relationships staff member, which allowed our center to establish strong relationships with local, regional, and national public health organizations. We were also able to strengthen the types and amount of employer-student engagement. Unfortunately, when that staff member resigned, we were unable to rehire due to financial constraints. Instead, this role has been held by student worker (with oversight from the associate director). As a result, our capacity to build new employer relationships, maintain existing relationships, and improve upon our employer-student engagement has diminished. In an effort to make up for the loss of this full-

time staff person, we explored new ways of serving students and found a natural collaborator in the University of Minnesota's Humphrey School of Public Affairs after realizing similarities in employers. We began a new partnership and teamed up to offer a career fair in early 2021. The pilot test of this collaboration resulted in great success, allowing us a new opportunity and an innovative way to better serve students.

Improvement Strategies: Building and maintaining employer relationships through our job posting system, APEx opportunities, and creating two employer spotlights per month (5- to 10-minute videos shared through our video library that spotlight targeted employers and interview alumni from those employers). Moreover, we are also partnering with UMN's Humphrey School of Public Affairs in offering two major events: 1) a career engagement fair and 2) a virtual DC visit. The virtual DC visit is an opportunity for Humphrey and SPH students to engage with DC alumni in informational interviews, learn about employment opportunities in DC, and even to attend information sessions offered by DC agencies and organizations.

H3. Student Complaint Procedures

The school enforces a set of policies and procedures that govern formal student complaints/grievances. Such procedures are clearly articulated and communicated to students. Depending on the nature and level of each complaint, students are encouraged to voice their concerns to school officials or other appropriate personnel. Designated administrators are charged with reviewing and resolving formal complaints. All complaints are processed through appropriate channels.

1) Describe the procedures by which students may communicate any formal complaints and/or grievances to school officials, and about how these procedures are publicized.

SPH seeks to be aware of and responsive to student issues and complaints. We offer many ways for students to channel their academic and student life concerns. Ideally, students would be comfortable raising concerns at the local level directly with their program coordinator, program director, or director of graduate studies. We seek to gain input from students through school committees, evaluations, and the SPH student senate. These avenues are meant to ensure open communication between students and the school. If a situation is not handled satisfactorily through any of these methods, or if the issue is particularly widespread or serious, students have the following options to report their concerns depending on the nature of the situation.

Academic Complaints

SPH is committed to ensuring that all of our students experience high-quality instruction, and a positive and supportive environment in which to work and learn. If students have a concern about their academic experience (e.g., grading, advising, instructional) they are encouraged to raise the concern locally and directly with their course instructor, program coordinator, program director, or director of graduate studies. If students are not comfortable raising the issue within their academic program, they can contact the SPH associate dean for education and student engagement. At the University level, students are entitled to a confidential consultation through the <u>Student Conflict Resolution Center</u> (SCRC). The SCRC offers informal conflict resolution services to resolve students' University-based problems and concerns. An ombudsman can provide confidential, impartial, and informal options.

Student Code of Conduct Violations

The University seeks to provide an environment that promotes academic achievement and integrity, protects free inquiry, and serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community. All students are expected to adhere to the <u>Student Conduct Code</u>. Any community member can report concerning behavior through the <u>Office for Community Standards</u> (OCS).

Discrimination, Harassment, or Sexual Violence Complaints

SPH strives to value and respect all that our students bring to the SPH community. However, events or conflicts may occur both in and out of the classroom that are deemed inappropriate and inconsistent with this value. Students have a right to report these concerns or incidents of bias in a confidential and supportive manner. Specifically, a student who feels they have been a victim of discrimination or bias based on their identity or beliefs can reach out to the director of diversity, equity, and inclusion within SPH or other University entities outside of SPH. We know students may not be aware of every resource available on campus to address bias-related issues, or may not feel comfortable reporting these issues or concerns to University offices. The director can be a resource and will use the following process to support the student. This is not an exhaustive list of steps, but an outline of critical pieces, meant to give both students and administrators an understanding of what may happen.

- The director of DEI, or another SPH administrator, will meet with the aggrieved student to collect information regarding an incident or issue.
- The director of DEI, or other SPH administrator, may then talk with faculty, staff, or other students to ascertain the context of the incident, as well as the intent and impact of the situation as a whole. We try to move quickly, but this process may take several days depending on the schedules of involved parties.
- The director of DEI will consult with related office(s) and use all of the available information to help determine whether the situation should be handled by another office or individual (ex: Equal Opportunity and Affirmative Action).
- Where applicable and appropriate, the director of DEI will identify and recommend options for resolution.
- The director of DEI will reconnect with students and communicate next steps. These may include (but are not limited to) referral to another campus office or administrator, offer for facilitation or mediation, or a class change. Our hope is to find reasonable resolutions that will make the aggrieved party/parties feel heard, understood, and continuously welcomed in the SPH community. The director of DEI can also provide informal support while the student works with another office to find a resolution.

Note regarding retaliation: The University and SPH prohibit retaliation against anyone who raises concerns about discrimination, harassment, sexual violence, or nepotism; opposes such practices; or participates in an investigation. Retaliation may include intimidation or harassment. If a student feels they have been a victim of retaliation in regards to a report they can communicate with the director of DEI or another administrator in SPH or the Equal Opportunity and Affirmative Action office.

Additional Campus Resources

Additional support is available at the University level as follows:

- Bias Response & Referral Network (BRRN)
 - Bias incidents happen at the University of Minnesota. These incidents undermine the University's efforts toward equity and inclusivity and cause distress and harm to those who experience them. Bias incidents limit our community's ability to excel in our work and learning. The University has an obligation to address bias, and the BRRN provides a consultative and consistent way to do so.
 - Once a report is sent to the BRRN, a member of the BRRN notifies the reporter the report has been received, provides resources for support, and learns more about the preferred response. The BRRN may also, as appropriate, provide educational information to parties involved in the bias incident report about the University's commitment to equity, inclusion, academic freedom, and freedom of expression. Other actions may include referring the bias incident report to investigative offices as appropriate, such as the Office of Equal Opportunity and Affirmative Action, the Office for Community Standards, Student Unions and Activities, the Office of the General Counsel, or the University of Minnesota Police Department.
- Office of Equal Opportunity and Affirmative Action (EOAA)
 - EOAA addresses concerns of discrimination and harassment based on race, color, creed, religion, national origin, gender, age, marital status, familial status, disability, public assistance status, membership or activity in a local commission created for the purpose of dealing with discrimination, veteran status, sexual orientation, gender identity, and gender expression; sexual misconduct; nepotism; and related retaliation.
 - EOAA addresses reports through investigation, informal problem-solving, consultation and education.
- Office of Institutional Compliance
 - The Office of Institutional Compliance supports the University and its members to consistently comply with all laws, rules, regulations, and related University policies that govern the University and to enhance cultural awareness of the importance of compliance and related integrity to the University's mission. The Ethics component of our mission complements our compliance program by promoting a culture where each member of the University community acts consistent with our University values.

- <u>Aurora Center for Advocacy and Education</u>
 - The Aurora Center for Advocacy & Education provides a free and confidential space for students, faculty, and staff affiliated with the University of Minnesota, Twin Cities and Augsburg University who are victims/survivors/concerned people of sexual assault, relationship violence, stalking, and sexual harassment.

All of these procedures are available on the SPH website (<u>here</u> and <u>here</u>) and outlined in student guidebooks.

The University and SPH are committed to maintaining an environment in which all can thrive in a community free of sex discrimination, including sexual harassment and sexual violence. Federal law and University policy require that all new students receive education about sexual violence prevention. All incoming graduate students are required to complete an online education module within their first year. The course is developed by EverFi and titled *Sexual Assault Prevention Training for Graduate Students*.

The course gives students the tools to identify, prevent, and report sexual assault, dating violence, domestic violence and stalking. It is built to teach strategies for complex scenarios like how to identify harassment from a faculty member or advisor and how to respectfully engage with undergraduate students. Learners are encouraged to reflect on the impact of sexual assault on a community and their role in creating a safe and supportive campus environment. The course complies with the Clery Act, the Violence Against Women Act amendments to the Clery Act, and supports Title IX compliance and also reviews Minnesota state laws and provides strategies to respond to disclosures.

Additionally, starting in 2021, graduate student employees are required to take an online educational module offered to all employees called *Preventing Sexual Misconduct, Discrimination and Retaliation.* This course provides information on preventing and responding to sexual misconduct, retaliation, and discrimination based on race, national origin, disability, gender identity and expression, religion and other protected characteristics. The educational module is a key component of the <u>President's Initiative to</u> <u>Prevent Sexual Misconduct (PIPSM)</u>, and is one of many important steps that the University is taking to create an equitable and inclusive culture and climate where all can thrive.

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.

Reporting allegations of student misconduct must be made through the process described by the <u>Office of</u> <u>Community Standards</u> (OCS). The Office of Community Standards will consult with and involve the associate dean for education and student engagement as needed.

When OCS receives a report, they will send an email to the accused student telling them about the report. Often, this letter will direct the student to schedule a meeting. An accused student may be required to attend an <u>informal meeting</u> with an OCS staff person to discuss the incident and learn about the disciplinary process. Even if not required, a student may still choose to have an informal meeting to discuss an incident. If appropriate, OCS may also meet with others who witnessed or reported the incident. The University's disciplinary process is designed to be fair to all the individuals involved. The University uses <u>preponderance of the evidence</u> as the standard of proof for alleged violations of the student conduct code. This means that students will be held responsible for a violation of the student conduct code if it is more likely than not that the violation has occurred.

Students who have been accused of or charged with violating the student conduct code, University housing policy, or other academic or conduct policies are able to find support with the office of <u>Student</u> <u>Advocate Services</u>. Advocates can help with understanding the disciplinary process and the accusations against the student, accompanying the student to disciplinary or investigatory meetings, resolving the case informally, presenting at the disciplinary hearing, and appealing the hearing panel's decision.

The School of Public Health complies with the University of Minnesota policies for <u>Resolving Alleged</u> <u>Student Conduct Code Violations</u> and the <u>Student Conduct Code Procedure: Twin Cities</u>. 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 have been no formal complaints or student grievances in the past three academic years.

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

Strengths

- The UMN has outstanding centralized resources for students to voice their complaints and concerns.
- We offer many ways for students to channel their academic and student life concerns.

Weaknesses

- Communication to students regarding process and procedures for reporting complaints and grievances can be enhanced. Since there are so many options for students it can be confusing to know where to start and support can vary depending on the context of the situation. Information can be made clearer through orientation efforts, website resources and collaboration efforts with academic divisions and programs.
- Additional clarification can be provided to SPH faculty and staff in order to ensure they are aware of bias/grievance policies, procedures and resources. This could be done through new faculty orientation, division/program level trainings or workshops, and enhancing online resources directed to faculty and staff.

H4. Student Recruitment and Admissions

The school implements student recruitment and admissions policies and procedures designed to locate and select qualified individuals capable of taking advantage of the school's various learning activities, which will enable each of them to develop competence for a career in public health.

1) Describe the school's recruitment activities. If these differ by degree (e.g., bachelor's vs. graduate degrees), a description should be provided for each.

The School of Public Health aims to enroll a highly motivated, academically accomplished, and diverse class of students who are passionate about public health. Toward this end, our Recruitment and Enrollment Office strives to reach a wide audience in order to educate and inspire the next generation of public health leaders. SPH is committed to ensuring that all people have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

We take a collaborative approach to setting annual enrollment goals with input from program directors and graduate student coordinators along with school leadership (dean, division heads, associate dean of education) and the educational policy committee. Enrollment goals include, among other targets, the number of incoming students and specific academic credentials (i.e. GPA, undergraduate major). We base goals on the capacity of the current faculty, advising and student services capabilities, and revenue needs.

The recruitment, admissions, and enrollment process is supervised by the associate dean for education. Day-to-day operations are handled by the director of recruitment and enrollment, associate director of recruitment and admissions, and coordinator of applications and admissions (collectively known as the Recruitment and Enrollment Office). Program directors and graduate student coordinators work closely and collaboratively with the Recruitment and Enrollment Office to support its activities.

SPH relies on many recruitment strategies. Annually, the recruitment and admissions team develop a strategic plan based on the previous year's application and incoming class data, as well as goals for the new admissions cycle. The strategy incorporates in-person recruitment events, virtual events, one-on-one meetings, email and phone outreach, and social media.

Each new recruitment cycle begins with emailing the previous year's prospective students who did not apply or enroll. To build the current cycle's applicant pool, we collect inquiries from the SPH website, host on-campus and virtual events, obtain names through the National Name Exchange and Educational Testing Service (ETS), and attend in-person and virtual recruitment fairs.

SPH attends an array of recruitment fairs, including 'This is Public Health', graduate and professional school events, and Idealist fairs. In addition, SPH is a member of the Public Health Powerhouse group, a consortium with five other top schools of public health. Each year, we collaborate with the Public Health Powerhouse group to market and host three admissions panel discussions and information fairs throughout the country each year.

Prospective students can learn more about the SPH and public health generally in a variety of ways, including on-campus and virtual information sessions, one-on-one meetings, and tours for prospective students. We also hold prospective student events on campus for the University of Minnesota undergraduate students in the public health minor, College of Biological Sciences, Undergraduate Public Health Association, and other groups who request a private event. Prospective students can also learn more through our web-based request form. An admissions viewbook is automatically sent to the prospective student. Additionally, doctoral applicants are connected directly to the appropriate graduate student coordinators.

For the last five years, we have managed prospective student contact information through Liaison's Enrollment Management Platform (EMP). On October 1, 2020, the Recruitment and Enrollment Office began using Marketing Cloud and will make a full transition to Salesforce in 2021. Throughout the year, we conduct on-going email outreach to prospective students. Emails include information general to public health and SPH, as well as program-specific details.

Though recruitment through the Recruitment and Enrollment Office is for all MPH, MS, MHA, and PhD programs, individual academic programs may conduct their own recruitment efforts. This is especially true of the MHA and PhD programs.

Recruitment Events by Year

	2018	2019	2020
Number of Events	29	54	70
Students Served	3280	12,935	9650

Additional Recruitment Efforts

The Recruitment and Enrollment Office believes that providing prospective students and admitted applicants with an authentic and personalized experience builds strong relationships with the applicant pool. To that end, we offer the following events:

Application Webinar and Program Forum Series

This four-part webinar series takes place monthly in September, October, and November. Each webinar is tailored to specific, required application documents about which we receive the most questions: resumes/CV, letters of recommendation, and personal statements. These 30-minute webinars advise applicants on how to compile these documents to make their application competitive. The series concludes with the academic program day. Programs are also invited to host a one-hour webinar to introduce applicants to their academic offerings.

Admitted Student Events

Each March, the Recruitment and Enrollment Office, in partnership with the academic programs, invites all MPH and MS students to campus for an admitted student event. This is the event, among all others, that results in the most positive enrollment decisions. Admitted Student Day showcases everything the University and SPH has to offer, and invites participation from offices across the University of Minnesota-Twin Cities campus. The event has two parts: academic programs and school-wide information. Each academic program is invited to host a special session for their admitted applicants. This session focuses on what makes the curricular offerings and educational opportunities unique. The school-wide session centers on student services and engagement options at SPH and the University. Many students have cited that Admitted Student Day solidified their commitment to attend the SPH.

Student Ambassadors

The Student Ambassadors are a diverse group of SPH student leaders who take active roles on campus and in their greater Twin Cities communities, demonstrating a passion for public health. By sharing experiences, time, and talents with prospective, admitted, and current students, ambassadors help shape the future of SPH in partnership with their peers and school administrators. Student Ambassadors gain valuable volunteer experience and develop their skills in leadership, public speaking, and community engagement. Through participation in the program, ambassadors can network with staff, faculty, and alumni, make valuable connections with their peers, and become eligible for scholarships.

Campus Tours

SPH offers tours on the third Friday of every month as well as by appointment. Student ambassadors conduct the tours in an effort to provide prospective students with the current student perspective. Self-

guided tours packets are also available for any walk-in prospective students. The virtual University of Minnesota campus tour is sent to students who are not able to come to campus in person; this was particularly useful during the COVID-19 pandemic.

Virtual Chat

Virtual chats are available during regular office hours. A student worker, student ambassador, or staff member is available to answer chat questions. Prospective students can also use the chat to leave messages which are then emailed to a staff member.

Information Sessions

SPH holds one-hour information sessions on a regular basis during fall and spring. These events are aimed at introducing prospective students to the programs and degrees, outlining curricular and research offerings, detailing the application process, and highlighting other opportunities. Each event consists of a 30-minute presentation by recruitment staff and student ambassadors followed by a Q & A.

Regional Recruitment

The UMN SPH is the upper Midwest's only top 10 school of public health. Therefore, our Recruitment and Enrollment Office focuses much of their prospective student generation on the five-state area: Minnesota, Wisconsin, North Dakota, South Dakota, and Iowa. We also reach out annually to colleges and universities within the region, including public health-related major advisors, and faculty and student organizations.

University of Minnesota Recruitment

The Recruitment and Enrollment Office strives to connect meaningfully with the greater University campus, because a significant number of our enrolled students completed their undergraduate education at the UMN. We serve as the advisors to the Undergraduate Public Health Association and attend its monthly meetings. Further, we connect regularly with the College of Biological Sciences, Pre-Health Student Resource Center, and the undergraduate public health minor advisors. The University also hosts two health-specific fairs that SPH attends.

Diversity Recruitment Efforts

Throughout the year, the Recruitment and Enrollment Office participates in a number of events to drive awareness about public health to underrepresented and under-resourced students. Annually, informational emails are sent to students on the National Name Exchange list. We also created and provided promotional materials for faculty to attend the National Indian Health Board's Public Health Conference and Field of Dreams Conference.

The Recruitment and Enrollment Office maintains a strong partnership with the Director of Outreach and Recruitment for the University's Graduate Diversity Office. This relationship allows the SPH to reach a broader, more diverse audience. Through this alliance, we are able to have representation at numerous diversity events, including:

- National Society of Black Engineers Annual Conference
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) Conference
- McNair Conferences, national locations and at the University of Minnesota
- American Indian Science & Engineering Society
- Society for Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS) Conference
- Society of Hispanic Professional Engineers (SHPE) Conference
- The Annual Biomedical Research Conference for Minority Students (ABRCMS) Conference

"Explore Public Health" Email Campaign

The "Explore Public Health" email campaign is a 12-part series of emails dedicated to educating the prospective applicant pool about public health. Each email is tailored to introduce the recipient to a new field of public health, the career paths for that area, and various degrees available.

SPH also participates in pathways events with high school-age students throughout the Twin Cities metro area. Currently, SPH is communicating with the St. Paul Public School District to formalize a partnership. We also host a table at the annual OutFront Minnesota Youth Summit. This organization brings together LGBTQ+ youth from across Minnesota to envision and advocate for an equitable future.

In an effort to create more access to public health education, SPH reduced barriers to application by eliminating the GRE for all MPH applicants for the fall 2020 admissions cycle, and all degree programs for the 2020-2021 admissions cycle.

Scholarship and Financial Awards

SPH has a number of scholarships and other financial awards allocated to admitted applicants. These awards may be granted by the Recruitment and Enrollment Office, academic program, or division. Applicants are automatically considered for all scholarships and financial awards available during the admissions process. Award amounts range from \$1000 to full tuition. We notify admitted students about scholarship decisions as soon as possible after acceptance.

All fall term applicants who complete their SOPHAS application by midnight (EST) on the priority deadline of December 1 and admitted to SPH will be considered for first-round, school-wide scholarships. Scholarships are awarded on a rolling basis. The University also offers several scholarships and fellowships which require separate applications. Additional resources are available for veterans.

Scholarships to attend SPH are highly competitive and only available to full-time, accepted students.

	FY18	FY19	FY20
# of Students Awarded	183	200	168
Total Scholarship Money Awarded	\$1,289,288	\$1,236,941	\$1,163,509

Merit-Based Scholarships

SPH awards a limited number of merit-based scholarship awards to admitted applicants. All MPH, MS, MHA, and PhD are eligible. Academic programs rank their top applicants in SOPHAS. The Director of Recruitment and Enrollment matches available funds to the top-ranked applicants. Scholarships are packaged to create the most competitive offer available. PhD scholarships and financial awards are handled by the division.

SPH Scholars of Excellence Awards

Scholars of Excellence Award honors SPH graduate and professional students whose research and scholarly interests are focused on issues of equity, diversity, and/or social justice and who demonstrate outstanding creativity, innovation, and potential for scholarly and/or professional excellence in their discipline or field. In addition, SPH Scholars of Excellence awardees demonstrate experience with, or commitment to, serving or working with underserved, underrepresented, or marginalized U.S. populations. Interested applicants must complete the diversity essay portion of the SOPHAS application.

Other Scholarships for Prospective Students

- Interdisciplinary Center for the Study of Global Change Fellowships: School of Public Health can nominate one prospective student for two different types of fellowships each year: Scholar and Mellon Fellowships.
- LEND (Leadership Education in Neurodevelopmental and Related Disabilities): LEND fellows are graduate students, postgraduate students, or community members who display outstanding talent

and commitment to improving the quality of life for children with neurodevelopmental disabilities and their families.

• Program Scholarship Awards: Academic divisions also award scholarships and assistantships. Each program establishes its own process and criteria for determining awards. Notification of any division-level scholarships awards are made by the program coordinators.

Traineeships: SPH offers federally funded programs that assist professionals in designated fields receive training. Funds are distributed by divisions/majors to their incoming students. Examples include:

- Maternal & Child Nutrition: Applicants must be registered dietitians who have work experience related to nutrition and/or maternal and child health and career goals related to leadership and/or research in this area.
- NIOSH: The National Institute for Occupational Safety and Health provides stipend support and tuition reimbursement for students enrolled in full-time graduate programs.

Graduate Assistantships: Students are eligible for graduate assistantships, which consist of teaching, helping conduct research, or administrative support. These highly competitive opportunities can help fund the students' education.

PhD Funding: Funding can be composed of fellowships, scholarships, teaching assistantships, and/or graduate assistantships. All PhD funding is awarded through the SPH divisions. Each division decides the funding goals for PhD students.

A sampling of recruitment materials can be found in the Electronic Resource File, Criterion H folder, H4 subfolder.

2) Provide a statement of admissions policies and procedures. If these differ by degree (e.g., bachelor's vs. graduate degrees), a description should be provided for each.

Admissions committees review applications for evidence of the applicant's intent and purpose in studying public health, past academic performance, program-specific academic potential, professional and life experience, English fluency (where required), and other factors such as an applicant's compatibility with faculty expertise and program directions. Refresher training on holistic review is provided annually to the admissions committees and program coordinators by the Recruitment and Enrollment Office. Further, the Recruitment and Enrollment Office works closely with the <u>Office of the General Counsel</u> to ensure that all information provided during the training is compliant with current holistic review regulations.

General admissions requirements include (all items should be submitted through SOPHAS):

- Baccalaureate or higher degree from an accredited college or university.
- Cumulative undergraduate GPA of not less than 3.00: The minimum preferred GPA is 3.0. Some programs may have a higher preferred minimum GPA. Check with specific programs for details. Note: No applicant will be permitted to register for classes who has not completed at least a U.S. baccalaureate degree (or foreign equivalent) from a regionally accredited university or college. There are no exceptions to this requirement.
- Statement of Purpose and Objectives.
- Resume or CV.
- Official transcripts: Official transcripts are required from each U.S. college or university attended and must be sent from that institution directly to SOPHAS. This includes a University of Minnesota transcript (if applicable) and a transcript from each school where the student completed courses. All applicants need to provide evidence of at least a U.S. baccalaureate degree (or foreign equivalent) at a regionally accredited institution of higher education; OR of a

post-baccalaureate graduate or professional degree at a regionally accredited institution of higher education. Admission to certain programs requires a prior advanced degree in a related area.

- Students must inquire directly with the program to which they are applying to determine what entrance exam, if any, is required.
- Three letters of recommendation from academic and/or professional references.
- Additional requirements may apply to international applicants or applicants who have completed a post-secondary degree in a country outside of the U.S. and Canada. Example:
 - Non-native English speakers need a World Education Services (WES) ICAP evaluation and official proof of English proficiency via TOEFL or IELT.

PhD applicants for programs in environmental health sciences and epidemiology both require a statement of research interests. Students who are admitted to the biostatistics PhD program will, upon matriculation, be required to provide a WES ICAP document-by-document evaluation of academic credentials directly to UMN SPH.

Each degree program has its own admissions committee composed of at least three faculty members who conduct application reviews and make admission decisions based on a holistic review. Decisions to admit students are made by the admissions committees in each program. Admissions committees may meet in person to discuss candidates or through electronic review of applications. All committees consider standard criteria such as grades, applied public health experience, diversity, etc. Each program has guidelines for admission decisions. Final admissions decisions are sent by program coordinators on a rolling basis.

- 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.
- Percentage of priority under-represented students (as defined in Criterion G1) accepting offers of admission

The groups considered priority populations in Criterion G1 for student recruitment are:

- 1) Black, both those of multigenerational American heritage and those from newer immigrant populations;
- 2) Native American/American Indian; and
- 3) Hispanic/Latino.

Our admissions committees strive to enroll students from underrepresented backgrounds, specifically Black, Native American/American Indian, and Hispanic/Latino populations. Our overall goal is to educate a future workforce representing the populations they serve as public health professionals. Diverse backgrounds are critical in the classroom to promote cross-cultural understanding and end stereotypes. SPH will continue to prioritize underrepresented students in the admissions process; however, we have no set target for either applications nor enrollment, as the goal in the immediate future is to create a more inclusive environment for our BIPOC students.

When we look at the BIPOC acceptance rates in their totality, we average between 20-25% acceptance rate over the past three academic years, in Template H4-1.

Template H4-1

Quantitative Enrollment Data				
Outcome Measures for Recruitment and Admissions				
Outcome Measure	Target	Year 1 AY 2018-2019	Year 2 AY 2019-2020	Year 3 AY 2020-2021
Percentage of priority under- represented students (as defined in Criterion G1) accepting offers of admission	Increase enrollment	21.8 (74 students)	20.4 (67 students)	26.8 (104 students)

But if we look more closely at our three identified priority populations, the data look different. Now the data shows us our acceptance rates for Black, Native American, and Hispanic students ranges between 43% and 100% acceptance.

Quantitative Enrollment Data					
	Outcome Measures for Recruitment and Admissions				
Outcome Measure	Target	Priority Populations	Year 1 AY 2018-2019	Year 2 AY 2019-2020	Year 3 AY 2020-2021
Percentage of priority under- represented Ir students (as defined en in Criterion G1) accepting offers of admission		Black	42.9	51.7	66.7
	Increase enrollment	Native American/American Indian	100	100	50
		Hispanic/Latino	46.7	50	46.2

Admissions committees also view public health-related experience as a meaningful indicator during the admissions review process. Some programs (community health promotion, executive public health administration, and policy) require public health-related experience for acceptance. Such experience, even for programs that do not require it, is viewed as an asset in the review process because it demonstrates a commitment to the profession, academic program fit, and understanding of career goals.

We continually review our application and enrollment data and seek to better understand where we've been and where we are in order to inform where we're going, specifically as it relates to setting a more inclusive and welcoming stage for our priority populations.

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

Strengths

 All degree programs at SPH have a strong commitment to increasing representation of our identified priority communities in our student body. This commitment shows in our efforts to reduce historic barriers to application, such as the GRE, and in our initiatives to create a more inclusive climate for BIPOC students. SPH is implementing a Strategic Plan for Antiracism, a key component of which will be strategies and resources to increase representation of our student priority populations, along with enhancing support systems and sense of community to ensure student success and retention.

- The recruitment and enrollment team uses innovative and proactive recruitment techniques focused on increasing the awareness of public health to a broad cross-section of the public.
- Admissions committees are focused on holistic application review.
- During the COVID-19 pandemic, the recruitment and enrollment team shifted seamlessly to innovative, online recruitment strategies—which has led us to think about the future of student recruitment in an online sphere.
- Because scholarships are critical to the recruitment and enrollment process, a new scholarship coordinator position was approved by SPH leadership. This position will set scholarship strategy, maintain scholarship policies, procedures, and compliance, and serve as a point of contact for students.

Weaknesses

- With a decentralized approach to admissions, each academic program varies in its communication, practices, and approaches to prospective and admitted students. In fall 2020, we conducted a comprehensive analysis of how to improve student services across the SPH. This analysis led to recommendations for enhancing student communications, streamlining processes, and creating continuity of experience for students and staff.
- We have had significant turnover in the Recruitment and Enrollment Office resulting in a lack of continuity of service for SPH and prospective students. The current team is building a professional, streamlined, customer-friendly and welcoming recruitment and admissions process. For future, so that we maintain institutional memory, we are creating a policies and procedures manual, and collaborating with program coordinators, to ensure that future turnover does not disrupt the student experience.

H5. Publication of Educational Offerings

Catalogs and bulletins used by the school to describe its educational offerings must be publicly available and must accurately describe its academic calendar, admissions policies, grading policies, academic integrity standards and degree completion requirements. Advertising, promotional materials, recruitment literature and other supporting material, in whatever medium it is presented, must contain accurate information.

1) Provide direct links to information and descriptions of all degree schools and concentrations in the unit of accreditation. The information must describe all of the following: academic calendar, admissions policies, grading policies, academic integrity standards and degree completion requirements.

UMN School of Public Health Website	https://www.sph.umn.edu/
Course Catalog - UMN	https://catalogs.umn.edu/
Academic Calendar - UMN	https://onestop.umn.edu/dates-and-deadlines
Admissions Policies - SPH	General https://www.sph.umn.edu/prospective/application-process/ https://www.sph.umn.edu/prospective/application-process/application-review-process/ https://www.sph.umn.edu/prospective/application-process/application-review-process/ https://www.sph.umn.edu/prospective/application-process/application-review-process/ https://www.sph.umn.edu/prospective/application-process/application-review-process/ https://www.sph.umn.edu/prospective/application-process/international-applicants/ MPH Programs https://www.sph.umn.edu/academics/degrees-programs/mph/community-health-promotion/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/environmental-health/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/epidemiology/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/pidemiology/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/pidemiology/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/pidemiology/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/public-health-administration-policy/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/public-health-administration-policy/admissions/ https://www.sph.umn.edu/academics/degrees-programs/mph/public-health-administration-policy/admissions/
	https://www.sph.umn.edu/academics/degrees-programs/mph/public-health- nutrition/admissions/

Table H5-1: Documentation of Degree Programs, Guidelines and Procedures

	https://www.sph.umn.edu/academics/degrees-programs/distance/phpexec/admissions/ MS Programs https://www.sph.umn.edu/academics/degrees-programs/ms/biostatistics/admissions/ https://www.sph.umn.edu/academics/degrees-programs/ms/environmental-health/admissions/ https://www.sph.umn.edu/academics/degrees-programs/ms/environmental-health/admissions/ https://www.sph.umn.edu/academics/degrees-programs/ms/health-services-research-policy-administration/admissions/ PhD Programs https://www.sph.umn.edu/academics/degrees-programs/phd/biostatistics/admissions/ https://www.sph.umn.edu/academics/degrees-programs/phd/biostatistics/admissions/ https://www.sph.umn.edu/academics/degrees-programs/phd/biostatistics/admissions/ https://www.sph.umn.edu/academics/degrees-programs/phd/biostatistics/admissions/ https://www.sph.umn.edu/academics/degrees-programs/phd/biostatistics/admissions/ https://www.sph.umn.edu/academics/degrees-programs/phd/environmental-health/admissions/
	https://www.sph.umn.edu/academics/degrees-programs/phd/epidemiology/admissions/
Grading Policies - SPH	https://docs.google.com/document/d/1GFxk6AcWYxfDPpEXPfWAdG1ppWRgwNC2h8x aRXRy7Eo/edit
Academic Integrity Standards - SPH	https://docs.google.com/document/d/1GFxk6AcWYxfDPpEXPfWAdG1ppWRgwNC2h8x aRXRy7Eo/edit
Degree Completion Requiremen ts - SPH	https://www.sph.umn.edu/current/resources/guidebooks/
Promotional Materials	https://www.sph.umn.edu/about/brand/facts-and-messaging/
SPH	https://www.sph.umn.edu/academics/degrees-programs/mph/degree-information/
	https://www.sph.umn.edu/academics/degrees-programs/ms/degree-information/
	https://www.sph.umn.edu/academics/degrees-programs/mha/degree-information/
Recruitment	https://www.sph.umn.edu/prospective/
Program Guidebooks	https://www.sph.umn.edu/current/resources/guidebooks/