JOSEPH J. ZILBER
School of **Public Health**

Final Self-Study Report

For Accreditation by the Council on Education for Public Health

January 14, 2022

UNIVERSITY of WISCONSIN
UWMILWAUKEE

uwm.edu/publichealth

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Introduction

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

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

Founded in 1956, the University of Wisconsin – Milwaukee is a public university. It is one of 13 universities on 26 campuses in the University of Wisconsin system.

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)

UWM encompasses 14 schools/colleges. Among them are the state's only architecture, freshwater sciences, and public health schools. UWM offers 206 programs with 180-degree programs, including 94 bachelor's degrees, 53 master's degrees, and 33 doctoral degree programs. UWM also offers the state's largest online program, which has 850 courses and 40 certificate and degree programs.

The 14 schools/colleges include:

School of Architecture & Urban Planning
Peck School of the Arts
Lubar School of Business
School of Education
College of Engineering & Applied Science
School of Freshwater Sciences
College of General Studies
Graduate School
College of Health Sciences
School of Information Studies
College of Letters & Science
College of Nursing
Joseph J. Zilber School of Public Health
Helen Bader School of Social Welfare

c. number of university faculty, staff and students

As of fall 2021, UWM employed 1,638 faculty and Instructional staff and 4,551 non-teaching academic staff, university staff, and student workers for a total of 6,189 people. A total of 24,029 students were enrolled.

d. brief statement of distinguishing university facts and characteristics

Located on Milwaukee's east side near Lake Michigan, the University of Wisconsin-Milwaukee (UWM) is Wisconsin's only public urban research university. UWM is designated as an R-1 doctoral research university by the Carnegie Classification of Institutions of Higher Education and plays a significant role in the regional and state economy. Unique research partnerships include the Northwestern Mutual Data Science Institute, Connected Systems Institute, and the Fresh Water Collaborative. The Kenwood Interdisciplinary Research Complex (KIRC) is home to cutting-edge research in physics, chemistry, and public health. Community engagement and entrepreneurship are also hallmarks of the UWM mission. Since 2015 UWM has earned the Carnegie Community Engagement Classification, with faculty and students across the campus committed to service learning and community-based research projects. UWM faculty have generated about 200 patents and patent applications, and over the last several years 18 student/alumni businesses were launched through UWM programs. Finally, UWM is committed to

serving as an access university. The M-cubed initiative, a partnership between the Milwaukee Public Schools (MPS), Milwaukee Area Technical College (MATC), and UWM, addresses college access for students graduating from the state's largest school district. Approximately 6,000 undergraduates (about 36%) are first-generation college students. In addition, about one thousand veterans, active-duty military, and their family members are students at UWM. In 2018 the Washington County and Waukesha branch campuses joined UWM as the College of General Studies in a UW system-wide restructuring that aligned two-year campuses with a nearby comprehensive campus. In 2020 the campus began a strategic planning process to prepare UWM for 2030 and beyond by addressing national demographic changes and enhancing the student experience. Now the 2030 Implementation Team is engaged in developing action steps for recommendations in four areas: revision of the undergraduate student experience, creation of a radically welcoming and engaging institution, conduct of top-tier research, and re-alignment of the administrative structure and program array.

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 Higher Learning Commission accredits UWM. UWM had its last accreditation evaluation in 2015, and the next cycle will be in 2022-23. Here is UWM's List of Accrediting Bodies, updated in August 2020. See ERF Introduction.1.e. for the table.

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

The Joseph J. Zilber School of Public Health (Zilber School) was established as a new graduate school on the UWM campus in 2009 by the UW Board of Regents. Three years of planning for UWM's role in addressing significant health disparities in Milwaukee preceded this action. There was no accredited MPH program, nor were any UWM institutes or centers brought into the new school. The first staff and faculty were housed initially in the basement of Engelmann Hall and then in offices in the Alumni House on the Kenwood campus on Milwaukee's east side. Environmental health and biostatistics laboratory space was carved out of Lapham Hall, and the School of Freshwater Sciences on Milwaukee's south side. The PhD in Environmental Health Sciences (EHS) enrolled the first students in 2009, followed in 2011 by the MPH degree in two tracks, Community and Behavioral Health Promotion (CBHP) and Environmental Health Sciences (EHS), and in 2012 by the PhD in Public Health with a concentration in CBHP.

The Zilber School has two locations. The school moved downtown to The Brewery in 2012, occupying the former cold storage building in the former Pabst Brewery. In summer 2015 faculty in Environmental Health Sciences moved their labs to the fifth floor of the new Kenwood Interdisciplinary Research Complex (KIRC) on the UWM campus.

The Zilber School became an applicant for Council on Education for Public Health (CEPH) accreditation in 2014. The school added the MPH degree in three tracks – Biostatistics, Epidemiology, and Public Health Policy and Administration – in fall 2014, and students from all five tracks graduated in 2016. Students enrolled in the PhD in Public Health with a concentration in Biostatistics in 2016. The Zilber School became Wisconsin's first accredited school of public health in 2017.

Since the school's initial accreditation in 2017, the school added its fourth PhD, in Epidemiology, an MS in Biostatistics, a coordinated MPH-MSW, and the BSPH Program. The MS Program had its first two graduates by fall 2020, while nine students graduated with the BSPH by spring 2021 (2 in fall 2020 and 7 in spring 2021). Three BSPH students began the Accelerated Master's Degree program in fall 2021. With funding from the HRSA Maternal and Child Health (MCH)

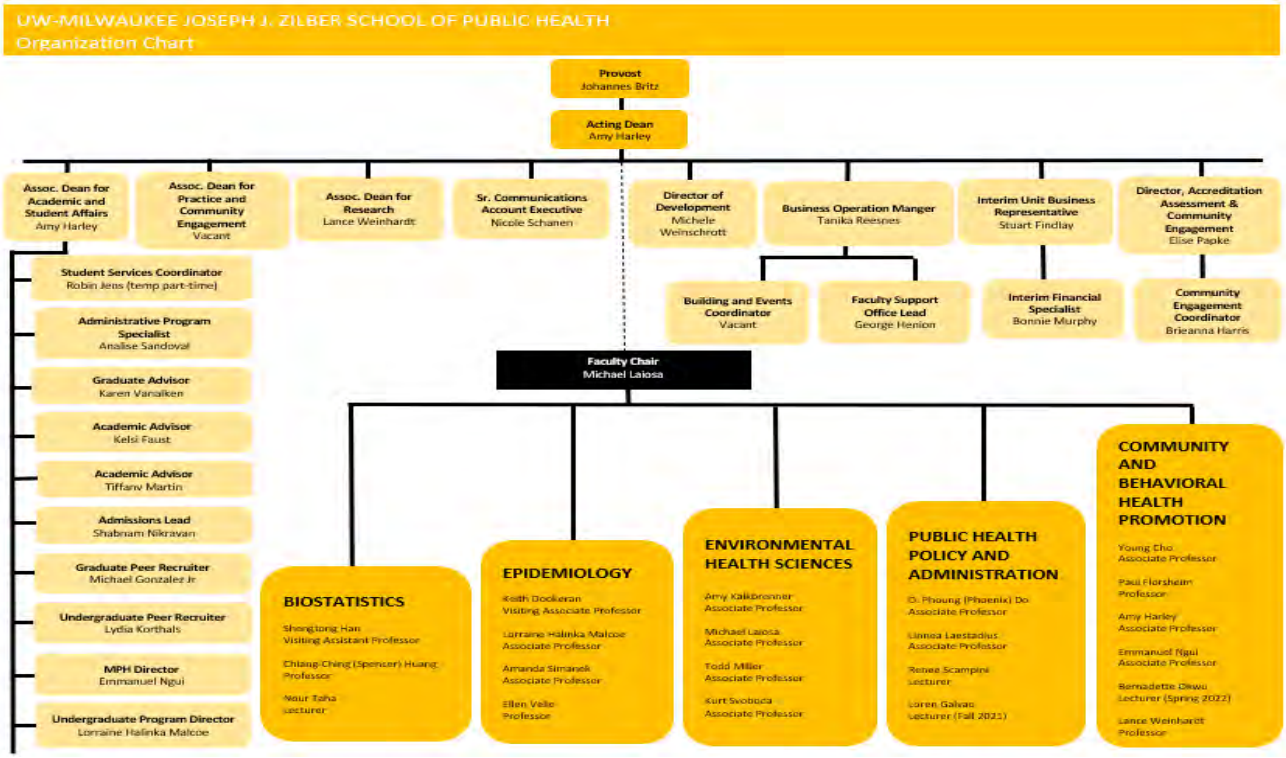
Catalyst Program, the first students enrolled in the new MCH Certificate this fall. Together with the College of Health Sciences, we were accepted into the Accreditation Council for Education in Nutrition and Dietetics' fourth cohort to develop a dually accredited MPH-RD degree program. We anticipate the first students enrolling in that program in fall 2023. A key focus of the Zilber School looking ahead is to increase undergraduate and graduate enrollments.

Turning to the 2030 strategic planning (Intro.1.d above), restructuring the three health-focused schools at UWM is one of the priorities of the realignment effort. Campus set a goal of moving from three health schools to two while maintaining CEPH accreditation eligibility for the Zilber School. Zilber School faculty and staff participated in discussions with colleagues in the Colleges of Health Sciences and Nursing during Summer 2021. Based on additional discussions in the fall; it was decided that faculty from the Zilber School and two departments in the College of Health Sciences, those housing Kinesiology/Nutrition and Health Informatics, would come together as the Joseph J. Zilber College of Public Health in mid-2023. A total of four proposed campus realignments, including the one impacting public health, were considered by the UWM Faculty Senate in mid-December 2021 as part of the formal approval process. The UW Board of Regents must also approve these realignments, which is expected in spring 2022. Key personnel in the Zilber School and the College of Health Sciences will begin discussions about college structure and curriculum modifications in January 2022. Required substantive change forms to CEPH are planned for early Spring 2023 submission. Full launch of the newly reorganized Zilber College of Public Health is expected in late summer/early fall 2023.

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

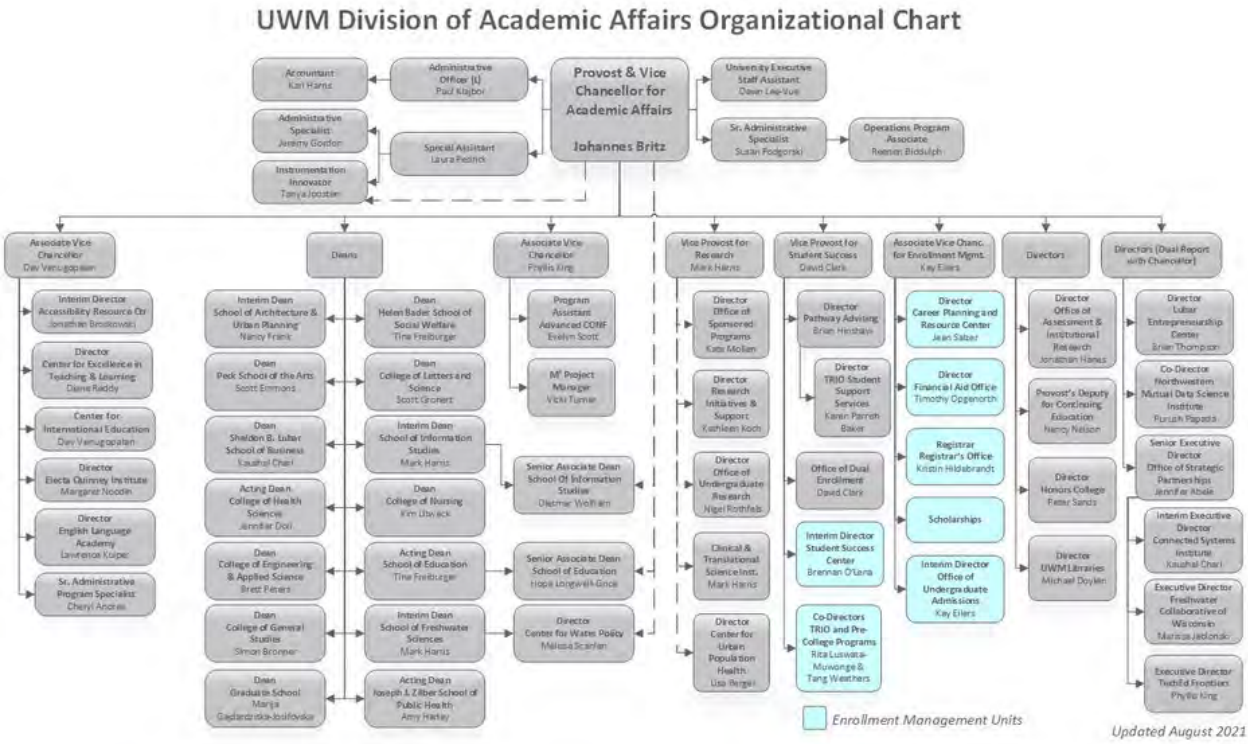
a. the school's internal organization, including the reporting lines to the dean

The Dean appoints the Faculty Chair following an election among the faculty. The Faculty Chair - Dean relationship is collaborative in nature, with the Faculty Chair acting as a liaison between the Dean and the rest of the faculty. Including the Faculty Chair, the Dean has seven direct reports. See ERF Intro 2.a. for a copy of the Zilber School Organization Chart.



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

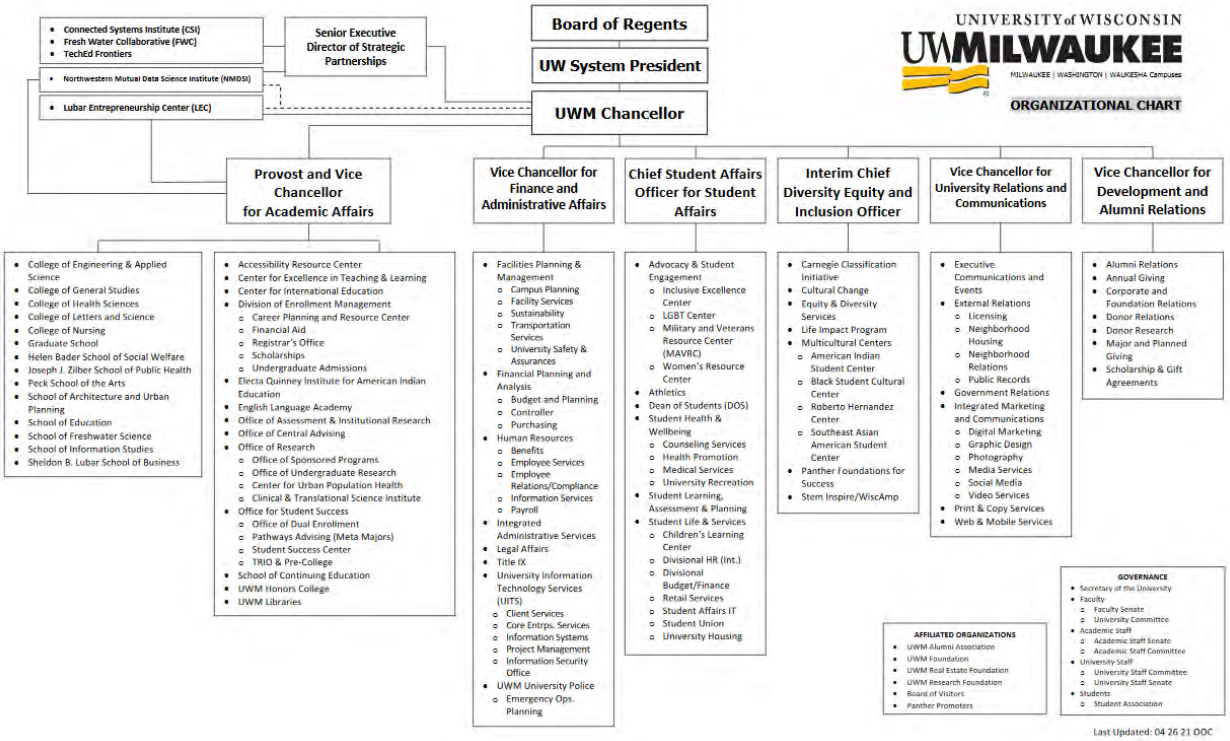
This Organizational Chart from the UWM Division of Academic Affairs shows the reporting lines of the 14 school and college deans to the Provost and Vice Chancellor of Academic Affairs.



Division of Academic Affairs Organizational Chart (updated August 2021)

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

This UWM Leadership Organizational Chart shows the lines of authority from the Zilber School Dean reporting to the campus Chancellor through the Provost.



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

Not applicable

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

See the Zilber School's Intro-1 instructional matrix on the following page.

Intro-1 Instructional Matrix – Joseph J. Zilber School of Public Health Degrees and Concentrations					
			Categorized as public health*	Campus based	Distance based
Bachelor's Degrees					
General	BSPH		X	X	
Master's Degrees	**Academic**	**Professional**			
Biostatistics (BIOSTATS)	MS	MPH	X	X	
Community and Behavioral Health Promotion (CBHP)		MPH	X	X	
Environmental Health Sciences (EHS)		MPH	X	X	
Epidemiology (EPI)		MPH	X	X	
Public Health Policy and Administration (PHPA)*		MPH	X	X	
Doctoral Degrees	**Academic**	**Professional**			
Environmental Health Sciences	PhD		X	X	
Epidemiology	PhD		X	X	
Public Health – Concentration in Biostatistics**	PhD		X	X	
Public Health – Concentration in Community and Behavioral Health Promotion	PhD		X	X	
Joint Degrees (Dual, Combined, Concurrent, Accelerated Degrees)	**Academic**	**Professional**			
2nd Degree Area	**Public Health Concentration**				
Social Work	Community and Behavioral Health Promotion		MPH-MSW	X	X
Social Work	Public Health Policy and Administration		MPH-MSW	X	X
3 ½ + 1 ½ Accelerated Master's Program	CBHP, EHS, EPI, and PHPA Concentrations		BSPH-MPH	X	X

*PHPA name change pending to Public Health Policy (PHP)
**The PhD in Biostatistics was suspended in fall 2020. Two students continue to be supported in the Program and are expected to graduate by spring 2023.

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.**

Intro-2 Zilber School Enrollment Fall 2021		
Degree		**Current Enrollment**
Master's		
	MPH in Biostatistics	**6**
	MS in Biostatistics	**4**
	MPH in CBHP	**20**
	MPH in EHS	**7**
	MPH in EPI	**24**
	MPH in PHPA	**31**
	MPH-MSW in Social Work and CBHP	**3**
Doctoral		
	PhD in EHS	**7**
	PhD in EPI	**4**
	PhD in Public Health / Biostats	**2**
	PhD in Public Health / CBHP	**26**
Bachelor's		
	BS in Public Health*	**45**

*****This figure reflects the total number of students who have completed 75 credits in the Public Health Major. A total of 77 students have declared public health as their major; the remaining 32 students have not yet completed 75 credits. Three students accepted into the accelerated master's degree program began in fall 2021 with 9 graduate credits and three undergrad credits and will be full-time MPH students in spring 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 (eg, 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 standing committees are constituted by the Faculty Chair. The first meeting of each standing committee occurs during the Faculty Retreat at the beginning of the fall semester. At this meeting each committee elects the chair, and committee members confirm the committee's charge. Currently, in addition to the Executive Committee and Faculty Council whose memberships are set, the school has three standing committees: the Academic Planning Committee (APC), the Graduate Program Committee (GPC), and the Undergraduate Program Committee (UPC).

Table A1.1 School Standing Committees & Evaluation Workgroup
Faculty Council
Charge
The immediate governance of the Zilber School of Public Health is vested in the faculty members of the Faculty Council. The Faculty Council has the authority to determine all departmental questions of educational and administrative policy and departmental operations, such as departmental staffing, educational and research supplies, budgetary needs, other than those matters which are vested in the Executive Committee. • The Faculty Council shall be responsible for oversight of teaching, research and service. • The Faculty Council shall carry out academic planning processes on a regular basis, including, but not limited to, the preparation of the academic program plans. • The Faculty Council is the sponsoring body for all standing committees of the Zilber School.
Composition
The Faculty Council consists of all individuals holding the rank of Professor, Associate Professor, or Assistant Professor, who hold an appointment in the Zilber School and represent any of the five areas of ZSPH: Biostatistics (BIOST), Community and Behavioral Health Promotion (CBHP), Environmental Health Sciences (EHS), Epidemiology (EPI), and Public Health Policy and Administration (PHPA).
Meeting Frequency
Monthly

Table A1.1 School Standing Committees & Evaluation Workgroup		
Members (2021—2022)		
Young Cho Phoenix Do Keith Dookeran Paul Florsheim Shengtong Han Spencer Huang	Amy Kalkbrenner Linnea Laestadius Michael Laiosa (Faculty Chair) Lorraine Halinka Malcoe Todd Miller	Emmanuel Ngui Amanda Simanek Kurt Svoboda Ellen Velie Lance Weinhardt
Executive Committee (EC)		
Charge		
The Executive Committee has the authority to make recommendation concerning appointments, dismissal, promotions, salaries, reviews, merit allocations, and other personnel matters, which are transmitted through the Faculty Chair to the Dean. The Executive Committee shall provide for the periodic review of the performance of every faculty member. These reviews include those for determining annual merit salary increases, contract renewal, tenure and promotion and tenured faculty review.		
Composition		
All tenured faculty members		
Meeting Frequency		
Monthly		
Members (2021-2022)		
Young Cho Phoenix Do Paul Florsheim Spencer Huang Amy Kalkbrenner	Linnea Laestadius Michael Laiosa (Faculty Chair) Lorraine Halinka Malcoe Todd Miller	Emmanuel Ngui Amanda Simanek Kurt Svoboda Ellen Velie
Academic Planning and Budget Committee (APC)		
Charge		
• Make recommendations to the Dean regarding the development of long-range plans and goals for the Zilber School with the preservation of high quality teaching, research and service. • Review academic program plans and related budgetary proposals regarding positions prepared by the Faculty Council and/or its sub-units. • Afford the Faculty Council and/or its sub-units ample opportunity to present information and position statements during programmatic and budgetary discussions. • Advise the Dean regarding criteria and priorities for budget adjustments. • Advise the Faculty Council and the Dean in the event the Faculty Council and Dean disagree over specific programmatic or budgetary decisions regarding open faculty positions or positions occupied by probationary faculty.		
Composition		
A minimum of 5 members broadly representative of the faculty. The Dean or his/her designee is an Ex-officio member of the APC.		

Table A1.1 School Standing Committees & Evaluation Workgroup	
Meeting Frequency	
Monthly	
Members (2021-2022)	
Amy Harley (Ex-officio) Paul Florsheim Linnea Laestadius	Todd Miller Lance Weinhardt (Ex-officio)
Graduate Program Committee (GPC)	
Charge	
• Oversees all continuing graduate programs within the Zilber School. • Reviews all proposals for new graduate programs or modifications of existing graduate programs in the Zilber School.	
Composition	
Student Services Coordinator; Director, Accreditation Assessment; MPH Program Director; Faculty Representatives from Each Track; 2 Students. The Dean or his/her designee is an Ex-officio member of the GPC.	
Meeting Frequency	
Monthly	
Members (2021-2022)	
Amanda Simanek (Chair) Phoenix Do Michael Gonzalez (PhD student) Amy Harley (Ex-officio) Spencer Huang Amy Kalkbrenner	Emmanuel Ngui (MPH Director) Claire Prieto (MPH student) Elise Papke (Ex-officio) Karen Vanalken (Ex-officio)
Undergraduate Program Committee (UPC)	
Charge	
• Oversees all continuing undergraduate programs and certificates within the Zilber School. • Reviews all new undergraduate course syllabi and proposals for new undergraduate programs or certificates or modifications of existing undergraduate graduate programs and certificates in the Zilber School. Undergraduate Program Director: • An Undergraduate Program Director will be selected from among the tenured faculty. The Undergraduate Program Director will serve a three-year term. There is no limit on the number of terms they may serve. • Duties will include serving on the Undergraduate Program Committee and serving as the primary contact for all curricular-related issues concerning undergraduate programs and certificates, undergraduate program-related policies and procedures, and undergraduate accreditation and program reviews. The Undergraduate Program Director will also contribute to, as needed, decisions regarding program implementation.	

Table A1.1 School Standing Committees & Evaluation Workgroup	
Composition	
1 Faculty Member from Each Area; Student Services Coordinator; 1 undergrad student	
Meeting Frequency	
Monthly	
Members (2021-2022)	
Young Cho (Chair)	Ishma Rizvi, Undergraduate (Voting member)
Keith Dookeran	Kurt Svoboda
Shengtong Han	Kelsi Faust, Undergraduate Advisor
Amy Harley (Ex-officio)	Tiffany Martin, Undergraduate Advisor
Kyle Kotz, Undergraduate; Accelerated Master's 2021	Analise Sandoval, Academic Affairs Administrative Program Specialist (Ex-officio)
Lorraine Halinka Malcoe, Undergraduate Program Director	

Evaluation Workgroup		
Charge		
Formally approved by Faculty Council on 1/31/17, the Evaluation Workgroup is sponsored by the Faculty Council and charged with reviewing data that comes from Faculty Council, APC, GPC, UPC, and the administration as part of the school's overall monitoring processes. The Faculty Council shall be responsible for oversight of teaching, research and service. • Review data from Academic Affairs for quality improvement initiatives from Academic Affairs • Review reports for campus purposes and accreditation		
Composition		
The Evaluation Workgroup consists of two faculty co-leads, the faculty administrative and committee chair positions, the PhD and MPH student representatives on the GPC, as well as the Academic Program Manager. Director of Accreditation Assessment provides staff support.		
Meeting Frequency		
At least once each semester		
Members (2021—2022)		
Young Cho (Co-Lead; UPC Chair) Michael Gonzalez (PhD GPC rep) Amy Harley (Assoc. Dean of Academic Affairs & Student Services) Michael Laiosa (Faculty Chair)	Lorraine Halinka Malcoe (Undergraduate Program Director) Todd Miller (APC Chair) Emmanuel Ngui (MPH Director) Elise Papke (Director, Accreditation Assessment) Claire Prieto (MPH GPC rep)	Amanda Simanek (GPC Chair) Lance Weinhardt (Assoc. Dean of Research) Student Services Coordinator (Vacant)

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**

The Zilber School Undergraduate Program Committee (UPC) and Graduate Program Committee (GPC) approve all undergraduate and graduate degree requirements, respectively. The UPC is charged with curriculum development and oversight including both General Education Requirements and major courses. In addition, the UPC oversaw development of the student handbook, which presents the degree requirements. The UWM bachelor's degrees are 120 credits and require a minimum of 33 General Education Requirement (GER) credits. The BSPH requires 39 GER credits, 54 public health major credits, and 27 elective credits.

The GPC, which oversees graduate programs per UWM Policies and Procedures (2.03.12; 2011), is charged with curriculum development and oversight. The GPC reviews and approves new academic programs and courses, reviews and approves modifications to existing programs, assesses student course evaluations and satisfaction surveys, and conducts curriculum reviews. The GPC also considers and approves revisions to the student academic handbook, which includes the degree requirements. The MPH degree ranges from 46-49 credits across the five tracks, including 24-25 core curriculum credits. The PhD programs, meanwhile, range from 65 to 75 credits.

The full faculty gives final approval at Faculty Council meetings for curriculum changes and new courses that have been approved by the UPC and GPC. After Zilber Faculty Council approval, undergraduate program changes, new programs and new courses are sent to the UWM Academic Program and Curriculum Committee (APCC). Graduate program changes, new programs, and new courses are sent to the Graduate Course and Curriculum (GCC) Committee and then to the UWM Graduate Faculty Committee (GFC) for final campus approvals.

b. **curriculum design**

The Zilber School faculty have the purview for curriculum design. At the undergraduate degree level, the faculty get input from the UPC for decisions regarding course content and sequencing, substitutions for campus courses, and content and sequence for public health major courses. UPC oversees all undergraduate curricula and reviews and votes to approve new programs and program modifications. Faculty submit syllabi for new courses to the UPC for approval. The UPC then transmits these courses to the Faculty Council for approval. Modifications of existing policies and new policies are reviewed and approved by the UPC, and then reported to the Faculty Council for approval.

At the graduate level, the Track Leads are primarily responsible with the respective track faculty to coordinate curriculum development, including the content and sequence of required and elective courses based on the program. GPC oversees all graduate curricula and reviews and votes to approve new programs and program modifications. Faculty submit syllabi for new courses to the GPC for approval. The GPC then transmits these courses to the Faculty Council for approval. Modifications of existing policies and new policies are reviewed and approved by the GPC, and then reported to the Faculty Council for approval.

c. **student assessment policies and processes**

The UPC monitors program assessment policies and processes for the BSPH Program. Course evaluations and feedback are two sources of students' input. At the graduate level, the GPC monitors program assessment policies and processes. One tool is the MPH

Competency Self-Assessment surveys, which students take when they begin the MPH Program, at the end of the first year, and in the Capstone during the last semester. The Evaluation Workgroup reviews the Competency Self-Assessment survey data, while the GPC reviews data from the Preceptor Evaluations as well as from two questions on the course evaluations.

The four school doctoral programs use the Graduate School's Milestones Program for the preliminary exam and dissertation defense requirements. To provide consistency across doctoral programs for advising and student progress, the GPC approved a progress letter template at its 5/11/21 meeting. The Faculty Council approved this template on 5/21/21.

d. admissions policies and/or decisions

At the undergraduate level, admissions processes, and decisions for new transfers and incoming freshmen are handled by the campus Office of Undergraduate Admissions. Zilber School faculty are not involved either in undergraduate admissions policymaking or review or admissions decisions. The process for internal major changes is coordinated with the campus by one of the school's professional advisors. The advisors participate in campus recruiting events and coordinate events with the Partners for Health units. The school has also developed its own recruiting materials. See ERF H4.1.

At the graduate level, The Office of Academic and Student Affairs, led by the Associate Dean for Academic and Student Affairs, coordinates the school's admissions policies and processes. Track faculty determine admissions criteria, review applications, and make admissions decisions for the MPH, MS, and doctoral programs. The MPH Director reviews all denied applications for the MPH degree. Sometimes those applications are sent to other tracks for consideration based on potential fit with a different track. The Graduate School makes the final decision and sends the letters to admitted students.

The MPH Director and a second faculty member reviews applications for the coordinated MPH-MSW Program with admissions staff in the Helen Bader School of Social Welfare (HBSSW). Each school makes its own decisions. Students must be admitted to both programs to be accepted into the coordinated degree. MPH-MSW Steering Committee members confer on applications with questions about fit for the program. Students admitted only to one of the two programs decide if they want to pursue that degree.

The Accelerated Master's Degree, with a 3 ½ plus 1 ½ format, enables qualified BSPH students to begin taking MPH courses in the fall of their senior year and be a graduate student in the spring of their senior year. Admission requirements include a minimum GPA of 3.0. To apply with automatic admission into the program, BSPH students must have a cumulative GPA of 3.7 or higher. All students applying to the program must submit an application as well as a Statement of Purpose. Students who are not automatically admitted must provide two letters of recommendation with their application. The UPC reviews applications and makes admissions decisions.

e. faculty recruitment and promotion

<u>Role of the Executive Committee</u>:
Recommendations Regarding Personnel Matters
The Executive Committee has the authority to make recommendations concerning appointments, dismissal, promotions, salaries, reviews, merit allocations, and other personnel matters, which are transmitted through the Faculty Chair to the Dean. The Executive Committee has the authority to propose changes to the faculty workload policies and make a recommendation to the Dean. Any policies regarding workload must be approved by the Executive Committee, the Faculty Council, and the Dean. See ERF A1.2 for the Zilber School's faculty workload policy.

The Executive Committee may, by annual vote, delegate to a sub-committee or to the Faculty Chair the authority to make recommendations with respect to any or all of the following matters:

- Salary increases
- Non-tenure appointments
- Appointment or promotion of classified personnel

The Executive Committee may delegate to those with the rank of Professor the authority to make recommendations for the promotions to the rank of Professor.

Decisions relating to renewal of appointments, and recommendations for tenure and merit salary increases shall be based on the Zilber School Promotion & Tenure Criteria (See ERF A1.2).

If a faculty position is to be eliminated, the Executive Committee may request the Dean to reconsider the decision. This request must be made within ten (10) working days of receipt of notification of the decision. The Dean shall respond to the Executive Committee within ten (10) working days.

Review of Faculty
The Executive Committee provides annual review of every faculty member's performance. These reviews include determination of annual merit salary increases, contract renewal, and tenure and promotion. Such reviews provide for a faculty member to choose to be heard on their own case and for the faculty member to be informed of the outcome of the review.

Post-tenure Review
All tenured faculty undergo annual reviews as stated above. In addition, every tenured faculty member undergoes a more detailed post-tenure review every five years. This packet consists of a review of a narrative of accomplishments and a plan for continuing development over the subsequent five years along with an updated CV. The EC considers teaching, scholarship and service during its review. The EC conveys its decision to the Dean, who in turn notifies the campus. The UWM Post-Tenure Review Policy is here. The Zilber School has its own post-tenure review policy and process (See ERF A1.2).

f. research and service activities

Expectations for faculty research and service are presented in campus and school policies and are derived from the relevant promotion and tenure documents. The UWM Divisional Committees present their promotion and tenure guidelines on their websites (See UWM Divisional Committees). Most Zilber School faculty go through the Division of Professions. The Division of Professions presents its guidelines in Procedures and Evaluative Criteria for Reviewing Departmental Recommendations for Appointment to Tenure and/or Promotion (2020). In the school, faculty refer to either the Zilber School Promotion & Tenure Criteria (See ERF A1.2) or the Appointment or Promotion to Full Professor (See ERF A1.2; 2019; updated 2020). See also ERF A1.2 for the Zilber School post-tenure review policy, which provides additional guidance for research and service expectations.

The Research Office creates and distributes school procedures for research. Faculty and research staff have access to the Zilber School Research Support Guide, which explains internal procedures and UWM research policy. See ERF A1.2.

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 Zilber School has its own governance policy and applies UWM policies and procedures to establish the rights and responsibilities of faculty, administration, staff, and students in the governance of the school. The school Governance Policy, initially approved by the faculty on September 8, 2015, and by the Dean on October 30, 2015, was revised in 2017 (2/28/17) and 2020 (10/20/20). The 2017 review clarified the scope of the APC's charge related to recommendations for long-range plans, while the 2020 review formalized the Undergraduate Program Committee with the launch of the new BSPH. The school governance document is available in ERF A1.3.

All UWM policies are available at: https://uwm.edu/secu/policies/

UWM faculty policies and procedures are available at: https://uwm.edu/secu/policies/faculty/
Note that all faculty at Zilber School are on nine-month contracts beginning in August and ending in May of each academic year.

UWM academic staff policies and procedures are available at: https://uwm.edu/secu/policies/as/

UWM classified staff policies and procedures are available at: https://uwm.edu/secu/us/

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.**

Faculty are encouraged to contribute to university-level decision-making activities through participation in campus committees. UWM has a rich history of faculty governance with many dozens of campus-wide committees, including the Faculty Senate, the University Committee, and the Academic Planning and Budgetary Committee, to name just a few. Currently, several members of the Zilber School faculty participate in university-level committees. For instance, in 2020-21, Dr. Halinka Malcoe served on the Professions Divisional Committee, which is charged with performing a campus-level review of all tenure and promotion cases. Dr. Velie served on the Graduate Faculty Committee, which reviews policies and requirements for all graduate degrees, including considering recommendations from the Graduate Curriculum and Graduate Programs Review Committees.

The Dean, Faculty Chair, Associate Dean for Academic Affairs, and Associate Dean for Research have opportunities for contributing to broader campus decision-making through regular meetings. The Dean participates in the monthly Deans meeting with the Provost, while the Faculty Chair, Associate Dean for Academic Affairs, and Associate Dean for Research participate in regular meetings with their respective counterparts in the other campus units.

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.**

Zilber School faculty interact regularly with each other in various contexts. Even with faculty on campus and downtown, they are engaged in each other's courses and research. They developed courses together for the BSPH, and with the BSPH housed in the KIRC, both full- and part-time faculty see each other on campus. Faculty visit each other's courses for guest lectures, sharing their research in courses like PH 101 Introduction to Public Health for the undergraduate students and in PH 801 Seminar in Public Health Research for doctoral students. They also collaborate on research projects on topics such as tobacco, food security, and epigenetic data analysis. In

addition, the one full-time non-PIF Academic Staff member, Director of Accreditation Assessment and Community Engagement, consistently participates with faculty in the standing committee meetings and the range of meetings described below. Finally, doctoral students, several of whom are working in the public health field, interact with faculty through their teaching either as TAs or adjunct faculty.

Regular opportunities for sharing information related to curriculum matters occur through the school's committee structure (see Section A1.1 above for a more complete description of the school's committees). The APC discusses long-term strategic planning issues for new programs, while the UPC and GPC consider issues related to admissions, curriculum, and student achievement. Both committees report at the monthly Faculty Council meetings, where broader discussions about support for teaching and learning, research and service occur.

In 2018, school and CBHP faculty participated in required campus 5-year program reviews for their MPH and doctoral programs. These processes include the preparation of a self-study report and site visits with external and campus reviewers. Findings from these reports were shared with the full faculty.

Since 2019 faculty have engaged in strategic planning about a long-term vision for the school, the MPH core curriculum, and the MPH Capstone. Visioning sessions occurred at Faculty Council meetings in February (2/22/19) and March (3/29/19). Dialogue about the school's vision continued in mini-leadership retreats (1/21/21 and 3/19/21) in context of leadership changes and the campus 2030 Report related to re-alignment of schools and colleges. See ERF A1.5 for notes from these sessions. Zilber School faculty interacted with colleagues from the College of Health Sciences and College of Nursing in an initial meeting (4/28/21) to review the process and timeline of this proposed reorganization of campus units. These meetings continued throughout the summer with professional facilitation and a focus on unearthing opportunities, challenges, and resources/information needed (6/23/2021, 7/7/2021, 7/21/2021).

Faculty discussed the MPH Core curriculum at two retreats (8/26/19, 3/13/20) and at a Faculty Council meeting (5/8/20). Discussion of the MPH Capstone occurred at the Faculty Council meetings on 3/19/21 and 4/16/21. See ERF A1.5 for the Faculty Council minutes. The Faculty Chair has named a small workgroup who worked on this topic over the summer and reported to the faculty at the August 27, 2021, retreat.

Also, in 2019 several Zilber faculty members and colleagues from the City of Milwaukee Health Department participated in a visioning session to strengthen collaboration in teaching, research, and workforce development. A few of the MHD staff had visited classes or served as Field Experience preceptors. Progress was delayed with changes in leadership at MHD, and recently Zilber leaders and Community Engagement staff met with the new Health Commissioner (4/7/21, 6/29/21; See ERF A1.5 for 6/29/21 notes) to renew the connection and identify specific actions going forward.

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

Strengths

- Clear organizational structure
- Small size of school supports non-departmental structure
- Small size of school facilitates faculty interactions across disciplines
- School policies and procedures consistent with UWM policies and procedures
- Clearly defined committee roles for students

Challenges

- Loss of faculty (1 in Summer 2019, 3 in Fall 2020, 5 in 2021)
- Retention of faculty
- Avoiding silos among track areas
- Increasing enrollments to assure school's growth
- Gaps in monitoring processes for student assessment policies
- Ongoing discussion about campus re-alignment of units as part of UWM's 2030 Report on strategic areas for enhancing student experience, welcoming and engaging institution, research, structure

Plan

- Assure ongoing collaboration by supporting faculty involvement in campus committees and research
- Strengthen monitoring processes for student assessment policies, admissions policies
- Hire 1 visiting assistant professor to start AY 2022-23 (status: contract signed)
- Hire 1 tenure-track research faculty in PHPA (status: application reviews)

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

NOT APPLICABLE

A3. Student Engagement

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

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

   Undergraduate, master, and doctoral students are an integral part of the Zilber School's governance. Formal mechanisms through UWM and the school exist to ensure participation by students in the life of the school. The Public Health Graduate Student Association (PHGSA) is recognized by the campus and has access to modest funds for travel stipends to conferences and for speakers. All students are members, and a faculty member serves as advisor. With the departure of the advisor in January 2020, the Director of Accreditation Assessment and Community Engagement is currently serving as faculty advisor, and a faculty member will be named in spring 2022 and continue in AY 2022-23. Beginning in fall 2021 the student leaders changed the name to the Public Health Student Association to include the undergraduates as well.

   An election process guides selection of officers. Students elect a president and vice president in April to serve in the following academic year, and the meetings are held monthly. The secretary and treasurer are elected in September in order to include first-year students. According to its 2012 Annual Report, the PHSA fulfills its mission of serving the students by being "a voice for the student body and a bridge between the administration and the students," and by "promoting public health initiatives, supporting students in their pursuit of academic excellence, and creating a friendly environment that fosters social interactions between students, faculty and staff."

   The school Governance Policy specifies roles for students on two standing committees. Section 3.5 (2) (a) in the Governance Policy establishes membership for one MPH student and one doctoral student on the GPC. Section 3.6.2.b establishes membership for undergraduate students on the UPC (see ERF A1.3). The PHSA coordinates elections for the GPC positions in the spring of each academic year for the following fall. The voting and non-voting undergraduate representatives on the 2020-21 UPC were selected by the Undergraduate Program Director and UPC Chair based on responses to a short governance participation survey. These two students are continuing on the UPC during AY 2021-22. The MPH and PhD student members of the GPC also serve on the Evaluation Workgroup.

   Undergraduate, MPH and doctoral students participated on the 2020-21 Self-Study Workgroups. They were invited to participate by the Undergraduate Program Director and Director of Accreditation, Assessment, and Community Engagement. The students joined the Community Involvement, Curriculum, Evaluation, Faculty, and Students Workgroups.

   See Table A3.1 below for the list of students participating on school committees and accreditation workgroups.

Table A3.1 Student Representation on school committees and PHGSA Officers	
Committee / Association	**Student Members 2018 – 2021**
Undergraduate Program Committee (UPC)	2020-21: Ishma Rizvi (spring; Voting member)
	2020-21: Kyle Kotz (spring; Non-voting member)
	2021-22: Ishma Rizvi
	2021-22: Kyle Kotz
Graduate Program Committee (GPC)	2018-19: Mireille Perzan (MPH student)
	2018-19: Rose Hennessy (PhD student)
	2019-20: Michael Gonzalez (MPH student)
	2019-20: Marin Schmitt (PhD student)
	2020-21: Gaëlle Sehi (MPH student; fall)
	2020-21: Marin Schmitt (PhD student)
	2021-22: Michael Gonzalez (PhD student)
	2021-22: Claire Prieto (MPH student)
Public Health Graduate Student Association (PHGSA) **Public Health Student Association** (PHSA); effective 2021-22	2018-19: Mireille Perzan, President
	2018-19: Abbie van Handel, Vice President
	2019-20: Jenn Woo, President
	2019-20: Rose Hennessy, Co/Vice President
	2019-20: Tara Jenson, Secretary
	2019-20: Michael Gonzalez, Jr., Treasurer
	2019-20: Gaëlle Sehi & Don Cramer, Members-at-large
	2020-21: Gaëlle Sehi, President
	2020-21: Maren Hawkins, Vice President
	2020-21: Tara Jenson, Secretary
	2020-21: Michael Gonzalez, Jr., Treasurer
	2020-21: Phoebe Elizabeth Troeller, Program Coordinator
	2020-21: Julia Estefania Arteaga, Community Outreach Coordinator
	2021-22: Claire Prieto and Brook Miller, Co-Presidents
	2021-22 Julia Arteaga, Vice President
	2021-22: Dan Holliday, Secretary
	2021-22: Addie Blanchard, Treasurer
	2021-22: Phoebe Troeller, Program Coordinator
	2021-22: Manal Alshihri, Brenda Castellanos, Maren Hawkins, Tara Jenson, Mary Wienkers, At-large Members
Accreditation Workgroups, 2020-21	
Community Involvement/Workforce Development Workgroup	Addie Blanchard, MPH representative
	Ashley Gerarden, BSPH representative
	Maren Hawkins, PhD representative
Curriculum Workgroup	Marin Schmitt, PhD representative
	Gaëlle Sehi, MPH representative
	Jarred Wuensch, BSPH representative
	Justin Yu, PhD representative
Evaluation Workgroup	Marin Schmitt, PhD representative

Table A3.1 Student Representation on school committees and PHGSA Officers	
	Gaëlle Sehi, MPH representative
Faculty Workgroup	Tara Jenson, PhD representative
Students Workgroup	Katie Asher, MPH representative
	Don Cramer, PhD representative
	Faith Tiwaloluwa Ogungbe, PhD representative

In addition, students provide input through the Town Hall process, course evaluations, the BSPH and MPH Graduation Surveys, as well as the Diversity Survey. The PHGSA/PHSA coordinates an annual process for providing feedback from students to the faculty and administration, which includes a town hall in the spring semester. In 2018, the GPC revised the policy based on feedback from students and faculty about gaps in the process. See ERF A3.1 for the policy and Flow Chart. In 2017 and 2018, students attended open meetings to provide comments in MPH and doctoral listening sessions. Due to the pandemic, the school did not conduct town halls in spring 2020, and the process in spring 2021 was conducted virtually. The GPC PhD and MPH student representatives sent out surveys to the respective student bodies. The representatives then summarized the responses for the GPC. GPC discussed responses for the PhD feedback on 3/17/21 and for the MPH results on 4/13/21. The PhD Town Hall was held on 4/23/21, and the MPH Town Hall was held on 4/28/21. The GPC discussed the input from both Town Halls and presented results to the faculty in May 2021. Student input through this process has contributed to changes in academic processes (clarification of doctoral preliminary exams processes, newly approved doctoral student progress letter, changes in course scheduling).

Students receive links to course evaluations about a week before the end of each semester. The Evaluation Workgroup uses two questions from the course evaluation to assess quality of the course and instructor. Data for these indicators are in Table B5.2 (see Indicators E1.6 and E1.7).

The BSPH and MPH Graduation Surveys are administered in students' last semester. See C2.5 for a discussion of results for class size and availability of faculty and H1.4 and H2.4 for discussions of student satisfaction with academic and career advising.

Finally, the Diversity Survey is administered every two years. The Spring 2020 Survey was conducted in Spring 2021 due to the pandemic. See G1.6 for results for this Survey.

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

Strengths

- Clearly defined roles for students on school committees and Self-Study Workgroups
- Student participation on UPC, GPC, Evaluation Workgroup
- Annual faculty-student feedback cycle with town halls in spring semesters
- Renewed student commitment to the Public Health Graduate Student Association (PHGSA); name change to reflect addition of undergraduate students

Challenges

- Monitoring student feedback from Town Hall process over time
- Developing more formal mechanisms for communication among PHSA and school administration

Plan

- Continue to confirm student members on UPC and GPC
- Continue Student-Faculty Feedback process with MPH and PhD Town Halls
- Incorporate feedback from PHGSA annual report

A4. Autonomy for Schools of Public Health

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

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

   The Dean's authority is derived from the Chancellor via the Provost and Vice Chancellor for Academic Affairs. The Provost oversees 14 different schools and colleges and also the UWM Libraries, the Center for International Education, the Honors College, the Graduate School, the Office of Research, Continuing Education, as well as the Office of Assessment & Institutional Research. The Dean meets one-on-one monthly with the Provost and participates in the Dean's Council with the other unit deans, which is led by the Provost. See the campus organizational chart in the Introduction in ERF Intro-2. b.

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.**

   All the professional school deans have the same reporting lines to the Provost. The Zilber School also has the same level of autonomy as the College of Engineering and Applied Sciences, College of Health Sciences, College of Nursing, Helen Bader School of Social Welfare, Lubar School of Business, School of Architecture and Urban Planning, and School of Information Studies.

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

   Strengths
   - Independent, autonomous school that is part of an accredited campus; dean has same rights and responsibilities as other deans on campus

   Challenges
   - Campus 2030 re-alignment discussions and recommendations
   - Planning for transition to new permanent dean in AY 2022-23

   Plan
   - Participate in campus discussions about strategies for realigning budget (i.e., shared services, collaborative certificates)
   - Participate in campus discussions about unit re-alignment

A5. Degree Offerings in Schools of Public Health

A school of public health offers a professional public health master's degree (eg, 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.**

   As shown in the Instructional Matrix on page 8, the Zilber School offers the MPH in five concentrations and three doctoral programs. The five MPH tracks are: Biostatistics, Community and Behavioral Health Promotion, Environmental Health Sciences, Epidemiology, and Public Health Policy and Administration.

   The three doctoral programs are in Environmental Health Sciences, Epidemiology, and Public Health with concentration in Community and Behavioral Health Promotion.

   The doctoral program in Public Health with concentration in Biostatistics was suspended in fall 2020.

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

   This link goes to the campus's catalog of programs and courses, with views for each school or college: UWM Academic Catalog 2021-22

   This link goes to the Zilber School page on the main catalog portal: https://catalog.uwm.edu/public-health/

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 Zilber School's guiding statements reflect its commitment to social and environmental justice and health equity. School faculty approved the Vision Statement at the beginning of the 2019-20 academic year and affirmed the Mission, Goals and Values Statement in 2019.

   Vision: A just, equitable, healthy future for people, communities, and the environment in Milwaukee, the state of Wisconsin, and beyond. (*Faculty Council Approved 9/20/19; 15-0-2)*

   Mission: To advance population health, health equity, and social and environmental justice among diverse communities in Milwaukee, the state of Wisconsin, and beyond through education, research, community engagement, and advocacy for health-promoting policies and strategies.

   Goals: The Zilber School faculty approved the following seven goal statements for education, research, community engagement and organization in August 2015.

   Education Goal E1 – Educate current and future public health professionals in the science, practice, critical thinking, and leadership skills necessary to promote population health and reduce health inequities.

   Education Goal E2 – Collaborate with diverse community partners through mutual learning to increase knowledge in order to improve population health and reduce health inequities.

   Research Goal R1 – Conduct relevant, rigorous, and collaborative research that advances public health knowledge and promotes population health and health equity.

   Research Goal R2 – Disseminate and translate research findings to influence the development of health- and equity-promoting policies and strategies.

   Community Engagement/ Service Goal CE/S1 – Engage with public health practitioners, policy stakeholders, and community partners through a variety of approaches to improve population health and health equity.

   Organization Goal O1 – Attract, support, and sustain a diverse student, faculty, and staff community to ensure an inclusive and collaborative work environment.

   Organization Goal O2 – Invest in people, resources, and infrastructure to foster excellence and advance the mission of the Joseph J. Zilber School of Public Health.

Values Statement: We, the Faculty, Administration, Staff, and Students of the Joseph J. Zilber School of Public Health, accept and adopt the UWM Guiding Values. We are also committed to carrying out the following values in our individual and collective public health research, teaching, community engagement, and practice:

- Integrity – We cultivate and sustain trust through transparent, open, and honest communications and decision-making. We uphold standards of public health ethics* in all that we do.

- Accountability – We hold ourselves and each other responsible to the highest quality, excellence, and measurable impact in our work.

- Collaboration – We emphasize and support collaborative, interdependent, mutually-respectful engagement and relationships within our school, across our campus, and with our communities.

- Diversity and Inclusion – We welcome, support, include, encourage, and respect diverse voices, experiences, perspectives, disciplines, and approaches in our work together.

- Health Equity – We strive to eliminate health inequities through research, teaching, community engagement, and advocacy.

- Social and Environmental Justice – We maintain an unwavering commitment to social and environmental justice, focusing our work on the fundamental, underlying requirements for healthy communities by addressing individual, structural, and institutional barriers to health.

*For example: Thomas JC, Sage M, Dillenberg J, Guillory VJ. A code of ethics for public health. *Am J Public Health*. 2002;92(7):1057–1059 OR the American Public Health Association's Public Health Code of Ethics (2019).

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

While the Zilber School does not have a formal strategic plan, faculty have engaged in several discussions to articulate long-term goals and revisit implications of new accreditation criteria on the MPH and PhD curricula. Prompted in part by feedback from the external team that conducted the site visit for the required MPH five-year review of new programs, the Faculty Chair initiated a strategic planning discussion at the 2/22/19 Faculty Council meeting. Further discussions occurred in subsequent Faculty Council meetings (3/29/19, 5/8/20) and faculty retreats (3/13/20, 1/19/21). See ERF B1.2 for the Faculty Council meeting minutes and the PowerPoint.

The school has identified needs as well as short- and long-term goals in the areas of research, academic programs, personnel, and shared governance. Examples of needs include enhanced grant writing support (research) and assessment of public health practice in the curriculum (academic). Examples of short-term goals are stronger connection to the City of Milwaukee Health Department (research, academic programs) and opportunities for applied research for doctoral students (research). Examples of long-term goals include enhanced interdisciplinary research involving faculty and students and funded training grant as well as workforce development initiatives.

Faculty have also discussed ways of strengthening the MPH core curriculum in light of some experience with the new 2016 accreditation criteria. Improved support for different student learning styles, structure of Capstone, and reinforcement of key concepts and knowledge across the MPH curriculum are among the topics being discussed. These conversations are ongoing. For example, three faculty drafted recommendations this summer for a new Capstone model, which they presented at the faculty retreat on August 27, 2021. Based on faculty input, they will

make some revisions and present the updated Report in a Faculty Council meeting later this academic year.

In addition to discussions in the school, faculty and staff participated in campus planning for research and the learning environment during AY 2018-19 and in fall 2019. Faculty discussed the Research Plan in Fall 2018. With campus and faculty input in Spring 2019, the Associate Dean for Research revised the plan in Summer 2019. The final Plan was approved and accepted in 2020. The school's graduate Outstanding Learning Environment Plan was submitted in summer 2019. See ERF B1-2 for the school's Research and Graduate Outstanding Learning Environment Plans. The focus now on the re-alignment of the three Partners for Health units has delayed implementation of specific goals related to the Research and Outstanding Learning Environment Plans.

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

Strengths

- Vision, Mission and Values Statements are consistent with UWM Statements and reflect school's commitment to health equity and social and environmental justice
- Series of school and faculty meetings and retreats; opportunities for input
- School 2019 Research and Outstanding Learning Environment Plans as part of campus planning initiative

Challenges

- Development of a plan for regular review of vision, mission, and values statements by all school constituent groups (limited review by community partners of Vision, Values Statement)
- Limited progress on school strategic plan; planning delayed, in part, by the pandemic
- Stalled progress on implementation of Research and Outstanding Learning Environment Plans

Plan

- Develop and implement regular routine/plan for review and revision of vision, mission, values, goals and objectives by all school constituent groups
- Continue school strategic planning, integrating with school Research and Outstanding Learning Environment Plans in context of campus re-alignment initiative

B2. Graduation Rates

The school collects and analyzes graduation rate data for each public health degree offered (eg, 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.**

Table B2-1.1 Students in BSPH Degree, by Cohorts Entering Between 2018-19 and 2021-22								
***Maximum Time to Graduate: 4 Years**								
	Cohort of Students	2018-19	2019-20	2020-21	2021-22	20xx-xx	20xx-xx	20xx-xx
2018-19	# Students entered	2						
	# Students withdrew, dropped, etc.	0						
	# Students graduated	0						
	Cumulative graduation rate	0%						
2019-20	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	10					
	# Students withdrew, dropped, etc.	0	0					
	# Students graduated	0	0					
	Cumulative graduation rate	0%	0%					
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	10	22				
	# Students withdrew, dropped, etc.	0	1	1				
	# Students graduated	2	7	0				

Table B2-1.1 Students in BSPH Degree, by Cohorts Entering Between 2018-19 and 2021-22								
***Maximum Time to Graduate: 4 Years**								
	Cohort of Students	2018-19	2019-20	2020-21	2021-22	20xx-xx	20xx-xx	20xx-xx
	Cumulative graduation rate	100%	70%*	0%				
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	2	21	18			
	# Students withdrew, dropped, etc.	0	0	0	0			
	# Students graduated	0	0	0	0			
	Cumulative graduation rate	100%	0%	0%	0%			

*Students remaining in the 2019-20 and 2020-21 cohorts have not reached the 4-year maximum time to graduate period.

Table B2-1.2 Students in MPH Degree, by Cohorts Entering Between 2014-15 and 2021-22									
***Maximum Time to Graduate: 7 Years**									
	Cohort of Students	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
2014-2015	# Students entered	17							
	# Students withdrew, dropped, etc.	0							
	# Students graduated	1							
	Cumulative graduation rate	6%							
2015-2016	# Students continuing at beginning of this school year (or # entering for newest cohort)	16	32						

Table B2-1.2 Students in MPH Degree, by Cohorts Entering Between 2014-15 and 2021-22									
***Maximum Time to Graduate: 7 Years**									
	Cohort of Students	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
	# Students withdrew, dropped, etc.	1	2						
	# Students graduated	13	0						
	Cumulative graduation rate	82%	0%						
2016-2017	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	31	27					
	# Students withdrew, dropped, etc.	1	2	0					
	# Students graduated	1	21	0					
	Cumulative graduation rate	88%	65%	0%					
2017-2018	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	8	27	30				
	# Students withdrew, dropped, etc.	0	0	2	0				
	# Students graduated	0	5	20	2				
	Cumulative graduation rate	88%	81%	74%	7%				

Table B2-1.2 Students in MPH Degree, by Cohorts Entering Between 2014-15 and 2021-22									
***Maximum Time to Graduate: 7 Years**									
	Cohort of Students	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
2018-2019	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	3	5	28	38			
	# Students withdrew, dropped, etc.	0	0	0	6	4			
	# Students graduated	0	1	2	15	0			
	Cumulative graduation rate	88%	84%	81%	57%	0%			
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	2	3	7	34	38		
	# Students withdrew, dropped, etc.	0	1	0	0	1	0		
	# Students graduated	0	0	3	4	25	0		
	Cumulative graduation rate	88%	84%	92%	70%	66%	0%		
2020-2021	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	1	0	3	8	38	45	
	# Students withdrew, dropped, etc.	0	0	0	0	1	4	2	

Table B2-1.2 Students in MPH Degree, by Cohorts Entering Between 2014-15 and 2021-22									
***Maximum Time to Graduate: 7 Years**									
	Cohort of Students	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
	# Students graduated	0	1	0	1	2	25	0	
	Cumulative graduation rate	88%	87%	92%	73%	74%	66%	0%	
2021-2022	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	0	0	2	5	9	43	42
	# Students withdrew, dropped, etc.	0	0	0	0	1	1	1	0
	# Students graduated	0	0	0	0	0	0	0	0
	Cumulative graduation rate	88%	82%	92%	0%	0%	0%	0%	0%

Table B2-1.3 Students in MPH-MSW Degree, by Cohort Entering in 2020-21								
***Maximum Time to Graduate: 7 years**								
	Cohort of Students	2020-21	2021-22	2022-23	20xx-xx	20xx-xx	20xx-xx	20xx-xx
2020-21	# Students entered	2						
	# Students withdrew, dropped, etc.	1						
	# Students graduated	0						
	Cumulative graduation rate	0%						

Table B2-1.3 Students in MPH-MSW Degree, by Cohort Entering in 2020-21								
***Maximum Time to Graduate: 7 years**								
	Cohort of Students	2020-21	2021-22	2022-23	20xx-xx	20xx-xx	20xx-xx	20xx-xx
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	2					
	# Students withdrew, dropped, etc.	0	0					
	# Students graduated	0	0					
	Cumulative graduation rate	0%	0%					

Table B2-1.4 Students in MS Degree, by Cohorts Entering Between 2019-20 and 2021-22								
***Maximum Time to Graduate: 7 Years**								
	Cohort of Students	2019-20	2020-21	2021-22	20xx-xx	20xx-xx	20xx-xx	20xx-xx
2019-20	# Students entered	2						
	# Students withdrew, dropped, etc.	0						
	# Students graduated	1						
	Cumulative graduation rate	50%						
2020-21	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	3					

Table B2-1.4 Students in MS Degree, by Cohorts Entering Between 2019-20 and 2021-22								
***Maximum Time to Graduate: 7 Years**								
	Cohort of Students	2019-20	2020-21	2021-22	20xx-xx	20xx-xx	20xx-xx	20xx-xx
	# Students withdrew, dropped, etc.	0	0					
	# Students graduated	1	0					
	Cumulative graduation rate	100%	0%					
2021-22	# Students continuing at beginning of this school year (or # entering for newest cohort)	0	3	1				
	# Students withdrew, dropped, etc.	0	0	0				
	# Students graduated	0	0	0				
	Cumulative graduation rate	100%	0%	0%				

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
2011-2012	# Students entered	4										
	# Students withdrew, dropped, etc.	0										
	# Students graduated	0										
	Cumulative graduation rate	0%										
2012-2013	# Students continuing at beginning of this school year (or # entering for newest cohort)	4	4									
	# Students withdrew, dropped, etc.	0	0									
	# Students graduated	0	0									
	Cumulative graduation rate	0%	0%									

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
2013-2014	# Students continuing at beginning of this school year (or # entering for newest cohort)	4	4	6								
	# Students withdrew, dropped, etc.	2*	0	0								
	# Students graduated	0	0	0								
	Cumulative graduation rate	0%	0%	0%								
2014-15	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	4	6	5							
	# Students withdrew, dropped, etc.	0	0	2	0							
	# Students graduated	0	0	0	0							

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
	Cumulative graduation rate	0%	0%	0%	0%							
2015-16	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	4	4	5	4						
	# Students withdrew, dropped, etc.	0	0	0	1	0						
	# Students graduated	0	0	0	0	0						
	Cumulative graduation rate	0%	0%	0%	0%	0%						
2016-17	# Students continuing at beginning of this school year (or # entering for newest cohort)	2	4	4	4	4	7					
	# Students withdrew, dropped, etc.	0	0	0	0	0	1					

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
	# Students graduated	1	0	1	0	0	0					
	Cumulative graduation rate	50%	0%	17%	0%	0%	0%					
2017-18	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	4	3	4	4	6	3				
	# Students withdrew, dropped, etc.	0	0	0	0		1	0				
	# Students graduated	0	1	1	0	0	0	0				
	Cumulative graduation rate	50%	25%	33%	0%	0%	0%	0%				
2018-2019	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	3	2	4	4	5	3	11			

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	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	0			
	# Students graduated	0	0	0	0	0	0	0	0			
	Cumulative graduation rate	50%	25%	33%	0%	0%	0%	0%	0%			
2019-2020	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	3	2	4	4	5	3	11	5		
	# Students withdrew, dropped, etc.	0	0	0	0	0	0	0	1	0		
	# Students graduated	0	0	1	2	1	1	1	0	0		
	Cumulative graduation rate	50%	25%	50%	40%	25%	14%	33%	0%	0%		

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
2020-2021	# Students continuing at beginning of this school year (or # entering for newest cohort)	1	3	1	4	3	4	2	10	5	8	
	# Students withdrew, dropped, etc.	0	0	0	0	0	0	0	0	0	0	
	# Students graduated	0	1	0	0	0	0	0	0	0	0	
	Cumulative graduation rate	50%	50%	50%	40%	25%	14%	33%	0%	0%	0%	
2021-2022	# Students continuing at beginning of this school year (or # entering for newest cohort)	1**	2	1	2	3	4	2	10	5	8	2
	# Students withdrew, dropped, etc.	0	0	0	0	0	0	0	0	0	0	0
	# Students graduated	0	0	0	0	0	0	0	0	0	0	0

Table B2-1.5 Students in PhD Degree, by Cohorts Entering Between 2011-2012 and 2021-22												
***Maximum Time to Graduate: 10 Years**												
	Cohort of Students	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
	Cumulative graduation rate	0%	50%	0%	40%	25%	14%	33%	0%	0%	0%	0%

*Two students in the 2011 cohort transferred to the MPH Program. One of these students failed the preliminary exam and chose to complete the MPH degree in Environmental Health Sciences. The second student decided to pursue the MPH in Biostatistics. These two students are not included in the graduation rate denominator.
**This student has been working on the PhD on a part-time basis. Since 2016 the school has provided some tuition waivers. The student achieved dissertator status in May 2017. Due to personal reasons the student's progress has been delayed. The student received a formal extension of the MTTG timeline and expects to graduate in May 2022.

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

Table B2-2: Doctoral Student Data for year 2020-21				
	PH - Biostatistics concentration	**PH – CBHP concentration**	**Environmental Health Sciences PhD**	**Epidemiology PhD**
# Newly admitted in 2020-21	0	5	1	1
# Currently enrolled (total) in 2020-21	2	26	7	3
# Completed coursework during 2019-20	1	2	0	0
# In candidacy status (cumulative) during 2019-20	1	15	3	1
# Graduated in 2019-20	1	2	2	1

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.**

Notes for each degree program are presented below.

B2-1.1: BSPH
The first students began in Spring 2019 as transfer students. Students are placed in a given cohort year once they have earned 75 credits and declared public health as their major. The students continuing from the 2019 and 2020 cohorts have not yet reached UWM's maximum time to graduate period.

B2-1.2: MPH
Based on UWM's maximum time to graduate of seven years for master's degrees, the school expects that one more student from the 2017-18 cohort will graduate. We also expect up to nine additional graduates from the 2019-20 cohort.

B2-1.3: MPH – MSW
The first two students enrolled in fall 2020. One of the two students started the MPH degree in fall 2019, switching to the MPH-MSW in fall 2020. This student has not reached the maximum time to graduate. At the end of AY 2020-21, the second student decided to stop the MPH portion for the time being in light of course scheduling conflicts with work and may return to finish within the maximum time to graduate period. Two new students enrolled in fall 2021.

B2-1.4: MS in Biostatistics
The first two students began the program in fall 2019 as transfers from the MPH in Biostatistics. Both have now graduated. The three students who entered in fall 2020 have not reached their maximum time to graduate. One student began the MS in Fall 2021.

B2-1.5: PhD Programs
While the Zilber School had set six years as the maximum time to graduate, the Graduate School allows 10 years. Based on feedback from the 2020 CEPH Annual Report, the school changed to 10 years. Therefore, Table B2-1.5 begins with the 2011 cohort that would have reached 10 years in 2020-21. The low graduation rates for the first three years of the EHS PhD Program are explained by student fit with the program, personal situations, and switches to other degree

programs. The remaining student in the 2011 cohort is on track to graduate in Spring 2022. As noted above in Table B2-1.5, the student has experienced some personal issues that delayed progress on the dissertation. In addition, the labs in the KIRC were closed due to the pandemic during a portion of 2020.

The school has implemented several approaches to enhance retention of doctoral students. Faculty have hosted three annual fall picnics for students, their families and faculty beginning in 2018. The fall 2020 picnic was not held due to the Covid-19 pandemic. Two courses, PH 801 Seminar in Public Health Research and PH 823 Applied Analysis of Binary Outcomes in Public Health Research, which enroll only PhD students, facilitate building of connections within cohorts. The Zilber School also provides tangible resources such as tutoring for PH823 students and emergency scholarships to facilitate re-enrollment. Finally, the GPC doctoral student representative and a GPC faculty member conducted an audit of the 2017 – 2020 PhD Town Halls to identify common and recurring themes and highlight areas that still needed to be addressed. The GPC communicated the findings to all PhD students. One response to a gap identified in the audit related to retention was the creation of an annual student progress form.

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

Strengths

- Graduation rates for the MPH degree are being met
- Graduation rates for the BSPH and MS degrees are on track
- Graduation rates in the EHS PhD are on track now
- Retention efforts are working

Challenges

- Need for additional financial support for retention efforts (e.g., scholarships, tutoring)
- Need for additional funding to support PhD students

Plan

- Rework scholarship application process to allow current students to apply (those who did not receive a scholarship upon matriculation)
- Pursue strategies for increasing support for doctoral students, including new enrollments in the BSPH Program to support TA positions, donor gifts for scholarships, grants for RA positions, and promotion of applications to campus PhD fellowships and dissertation awards

B3. Post-Graduation Outcomes

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

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 Template B3-1.**

   Data are provided for the MPH, MS, and PhD degrees. For the BSPH Program, of the 11 students who graduated in 2020-21 and Fall 2021, one started the MPH Program in Fall 2021. The remaining 10 students have not had up to 12 months to find a position. For the MPH-MSW Program, two students started the coordinated MPH-MSW degree in Fall 2020. One student is continuing in the Program in Fall 2021 and two students began the Program in Fall 2021. Post-graduation outcomes data are presented below in Tables B3-1.4.

Table B3-1.1 MPH Degree

Post-Graduation Outcomes	2017-18 Number and percentage	2018-19 Number and percentage	2019-20 Number and percentage
Employed	19 (73%)	14 (78%)	26 (82%)
Continuing education/training (not employed)	5 (19%)	4 (22%)	3 (9%)
Not seeking employment or not seeking additional education by choice	0	0	0
Actively seeking employment or enrollment in further education	0	0	1 (3%)
Unknown	2 (8%)	0	2 (6%)
Total graduates (known + unknown)	26 (100%)	18 (100%)	32 (100%)

Table B3-1.2 MS Degree

Post-Graduation Outcomes	2018-19 Number and percentage	2019-20 Number and percentage	2020-21 Number and percentage
Employed	NA	1 (100%)	1 (100%)
Continuing education/training (not employed)			
Not seeking employment or not seeking additional education by choice			
Actively seeking employment or enrollment in further education			
Unknown			
Total graduates (known + unknown)		1 (100%)	1 (100%)

Table B3-1.3 PhD Degree			
Post-Graduation Outcomes	**2017-18 Number and percentage**	**2018-19* Number and percentage**	**2019-20 Number and percentage**
Employed	2 (100%)	0	6 (100%)
Continuing education/training (not employed)	0	0	0
Not seeking employment or not seeking additional education by choice	0	0	0
Actively seeking employment or enrollment in further education	0	0	0
Unknown	0	0	0
Total graduates (known + unknown)	2 (100%)	0	6 (100%)

*No PhD students graduated in 2018-19. None had reached the maximum time to graduate in this year.

Table B3-1.4 12-Month Post-Graduation Outcome Rates for MPH, MS, and PhD, 2017-18, 2018-19, 2019-20			
Degree	**2017-18**	**2018-19**	**2019-20**
MPH	100%	100%	97%
MS	NA	NA	100%
PhD	100%	NA*	100%

*No PhD students graduated in 2018-19. None had reached the maximum time to graduate in this year.

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

The school is reaching the desired outcome rate for employment or enrollment in further education among its MPH, MS, and PhD graduates. The school will need to establish mechanisms for keeping in touch with BSPH alumni. Regarding the MPH-MSW degree graduates, the Zilber School will coordinate alumni surveys with the Helen Bader School of Social Welfare.

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

Strengths

- Post-graduation outcomes are met for the MPH, MS, and PhD degrees

Challenges

- Limited data from alumni (email addresses and employers); no alumni association
- Need to add Alumni survey for BSPH and MS students

Plan

- Implement annual Alumni surveys 2 times a year and send out survey every 6 and 18 months following graduation to each graduate in all degree levels
- Create formal alumni database to include all degree program 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.**

The Zilber School conducts alumni surveys of MPH students six months after their graduation (i.e., November for May graduates and June for December graduates). Two of the survey questions ask alumni about: 1) their preparation for specific public health practice and research skills (12 items/Q17), and 2) their overall attainment of competencies through coursework, the Field Experience, and the Capstone for working in public health (1 item/Q18). The first question consists of 12 items and uses a 3-point Likert Scale; Well Prepared, Moderately Prepared, Not at all Prepared). The second question on overall preparation uses a 5-point Likert Scale (Strongly Agree to Strongly Disagree). The alumni survey does not include the track competencies. The surveys were administered via Qualtrics, an online survey module.

Due to staff changes over time, data collected from alumni surveys between 2016-2018 are not available. A subsequent staff change late in Fall 2020 meant that several surveys were sent out in Spring 2021. Alumni surveys distributed in Spring 2019 and 2020 had low response rates. For the 2019 graduates, the response rate was 26% (5/19), and for the 2020 graduates the response rate was 33% (10/30). The overall response rate was 31% (15/49). Given the small numbers we present the data for the two questions in aggregated form below.

Table B4.1. Percent of MPH Alumni Well Prepared with Public Health Practice and Research Skills among 2019 and 2020 graduates

MPH Program prepared you well with the following 12 public health practice and research skills:	Percent Well Prepared (N=15)
• Explaining the historical perspectives and foundational principles of public health	66.7%
• Describing how interrelationships among socioeconomic, biological, behavioral, and environmental factors have shaped population health and health inequities	100.0%
• Integrating principles of social and environmental justice into practice	66.7%
• Employing ethical and social/environmental justice principles	60.0%
• Implementing approaches that recognize the social, cultural, and environmental circumstances of individuals, communities, and populations	66.7%
• Utilizing appropriate quantitative and/or qualitative methods in public health practice and research	71.4%
• Applying inter-disciplinary theories, research methods and best practices to address public health issues and promote population health	73.3%
• Collecting, synthesizing and critically analyzing information and data to identify and address public health issues and inform interventions	80.0%
• Practicing professionalism, demonstrated by integrity, respect, transparency, sound judgment, and constructive interactions with colleagues, community members, stakeholders and the public at large	73.0%

Table B4.1. Percent of MPH Alumni Well Prepared with Public Health Practice and Research Skills among 2019 and 2020 graduates	
MPH Program prepared you well with the following 12 public health practice and research skills:	**Percent Well Prepared (N=15)**
• Demonstrating leadership and partnership skills that foster and support collaborations across diverse communities, settings and sectors	66.7%
• Communicating effectively about public health issues with diverse audiences using a variety of strategies and modalities	73.3%
• Advocating for the public's health and health equity	86.7%

Table B4.2 Percent of Alumni in Agreement about Preparation for Public Health Work among 2019 and 2020 Graduates	
• The competencies I achieved through coursework, the Field Experience, and the Capstone prepared me for working in public health.	85.7%

Overall alumni felt prepared for working in public health following graduation from the Zilber School. The majority of students reported that the MPH program prepared them well in all 12 competency areas. In addition, 86% of alumni agreed (Strong Agree, Agree on a 5-point Likert Scale) that the competencies they achieved through coursework, the Field Experience, and the Capstone prepared them for working in the field of public health. However, in five of the 12 competency areas, less than 70% of students felt that they were well prepared.

As indicated in Table B4.1, among the five competency practice areas in which MPH alumni felt less well prepared are two related to social and environmental justice. For example, 60% of alumni felt well prepared to “employ[ing] ethical and social/environmental justice principles,” while two-thirds of alumni felt well prepared to “integrate principles of social and environmental justice into practice.” A third area focuses on approaches that recognize the social, cultural and environmental contexts of populations. About two-thirds of alumni felt well prepared in this practice skill. With regard to leadership skills to “foster and support collaborations across diverse communities, two-thirds of alumni responded that they felt well prepared in this area.

While students would have the opportunity to apply these practice areas and skills in the Field Experience and Capstone courses, their experiences would vary across settings and projects. All MPH students complete Competency Self-Assessment surveys at three time points during their program (Pre, at orientation; Interim, after the first year of courses; and Post, during the Capstone course). In addition to the 22 MPH Foundational Competencies, the Competency Self-Assessment Survey also includes track competencies. We expect to have complete data collected at these three time points for the 2018, 2019 and 2020 cohorts by Spring 2022. These data will enable us to use the data at the individual, track and program levels to assess development in the acquired levels of competencies longitudinally.

Although the school has the MPH competency self-assessment data collection process in place, we acknowledge that we have limited experience with implementing a system to assess alignment between student self-evaluation and delivery of competencies in the MPH Program. The 2019 and 2020 Alumni survey results revealed gaps in certain competencies, and we are working to enhance our ability to investigate areas of the program that need to be changed. In addition, competency areas where alumni felt that they were not as well prepared should be checked at the course level. Changes at both the program and course levels will be necessary to assure that alumni are well prepared for their positions in public health. The Evaluation Workgroup and Faculty Council will conduct regular reviews of the MPH competency self-assessment survey data to assess program-level issues. The Faculty Chair and Associate Dean

for Academic Affairs will identify courses delivering competencies where students felt less well prepared and share this information with course faculty for content and/or assessment revision.

Beginning in late spring 2020, the school initiated an agreement with the College of Health Sciences Data Analytics team for data analysis support. This partnership has enhanced the school's data capacity, including for generating useful reports from the surveys, and is continuing this academic year.

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

See ERF B4.2 for the Alumni Survey and data compilation from aggregated 2019 and 2019 Alumni Surveys.

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

Strengths

- MPH Competency Self-Assessment process in place
- Agreement with the College of Health Sciences Data Analytics team

Challenges

- Delays in conducting 2019 and 2020 alumni surveys
- Limited participation on the alumni surveys
- Incomplete alumni data (emails and employers)
- Limited reflection on competencies from student self-assessment data in curriculum and course-level evaluations
- Limited capacity in data analytics

Plan

- Continue implementing MPH Alumni surveys six months following graduation and add a second survey at 18 months
- Enhance alumni engagement through school events and social media
- Review Alumni Survey to align foundational and track competency sets
- Update plan for faculty review of MPH competency self-assessment and alumni survey data
- Implement new process in Academic Affairs to track alumni contact information
- Continue agreement with College of Health Sciences Data Analytics team

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.**

   The self-study evaluation plan is a summary prepared by the Evaluation Workgroup. The Evaluation Workgroup is comprised of selected members from the Faculty Council and the three standing committees, APC, GPC, and UPC. The group also includes the Faculty Chair, MPH Director, Undergraduate Program Director, Associate Dean for Academic and Student Affairs, Associate Dean for Research, Accreditation Assessment Director, and Student Services staff. The Workgroup is charged with planning evaluation activities, monitoring implementation of evaluation methods, and facilitating communication among the key parties responsible for data collection, analysis, and review of the indicators summarized in Table B5-1.

   While the school's initial evaluation plan included quite a number of indicators, faculty and administration acknowledged that many fewer measures were actually reviewed with any regularity. Over the course of several meetings in 2020 (Evaluation Workgroup, 5/4/20, 11/6/20; Faculty Council (5/8/20), the Evaluation Workgroup and faculty affirmed the school's seven goals and focused on identifying those measures that aligned with the school's mission as the most important. Faculty also confirmed target benchmarks for the final success indicators based on history with these data. The current set, consisting of 28 indicators across the education (2), research (2), community engagement/service (1), and organization (2) goals, is comprised of both school-identified and CEPH-required measures.

   To enhance the school's data management capabilities, in spring 2020 the Zilber School Dean initiated an agreement with the College of Health Sciences (CHS) Dean for 15% time with the Director of the CHS Office of Performance Analytics. The Director of Accreditation Assessment, Faculty Chair, Associate Dean for Academic and Student Affairs, and one of the professional advisors coordinate with the Data Analytics Director in monthly meetings regarding timing of analysis for the competency self-assessment, alumni, and diversity surveys and course evaluation data. The Data Analytics Director also assists with retrieving information from the campus databases in support of the Student Services staff. The Director of Accreditation Assessment also consults with the Faculty Chair, Evaluation Co-Lead and Workgroup, and Associate Dean of Academic and Student Affairs, providing updates and new requests to the Data Analytics Director as needed. This plan is continuing for AY 2021-22.

   The school's evaluation plan with measures and indicators, data sources and presentation, and review responsibility is presented in Table B5-1 below. Data for these measures in 2018-19, 2019-20, and 2020-21 are presented in Table B5.2.

Table B5-1 Evaluation Plan		
Evaluation measures	***Identify data source(s) and describe how raw data are analyzed and presented for decision making****	***Responsibility for review***
Education Goal E1: Educate current and future public health professionals in the science, practice, critical thinking, and leadership skills necessary to promote population health and reduce health inequities		
E1.1. Percent of students graduating from programs in designated timelines *Success Indicators*: ~ 70% BSPH, MPH, MS graduated within 4 and 7 years, respectively ~ 60% PhD graduated within 10 years	*Data Source:* Academic Affairs database, transcripts *Data presentation:* Summary report; summary prepared by Evaluation Workgroup Leads	Fall Faculty Retreat (August) and October Evaluation Workgroup meeting
E1.2. Percent of students employed or enrolled in another education program within 12 months of graduation *Success Indicator*: 80% employed or continuing education	*Data Source:* Academic Affairs data, LinkedIn; Alumni Survey at 6 and 18 months *Data presentation:* Summary report; summary prepared by Evaluation Workgroup Leads	October Evaluation Workgroup meeting
E1.3. Percent of MPH student satisfaction with achieving defined competencies and applying them after graduation *Success Indicator*: 80% very satisfied/satisfied	*Data Source:* Alumni Survey at 6 and 18 months since graduation *Data presentation:* Summary report; summary prepared by Data Analytics Team	February Evaluation Workgroup meeting
E1.4. Percent of student satisfaction with class size *Success Indicator*: 80% very satisfied/satisfied	*Data Source:* Graduation Survey *Data presentation:* Summary report; summary prepared by Data Analytics Team	November Evaluation Workgroup meeting; December Faculty Council meeting
E1.5. Percent of student satisfaction with availability of faculty *Success Indicator*: 80% very satisfied/satisfied	*Data Source:* Graduation Survey *Data presentation:* Summary report; summary prepared by Data Analytics Team	November Evaluation Workgroup meeting; December Faculty Council meeting
E1.6. Percent of student satisfaction for overall course rating; BSPH mean $\geq$ 3.75; Grad mean $\geq$ 4 (high) *Success Indicator*: 80% strongly agree/agree	*Data Source:* Course evaluations* (Q #1) *Data presentation:* Summary report; summary prepared by Data Analytics Team	October Evaluation Workgroup meetings (prior AY)
E1.7. Percent of student satisfaction for overall instructor rating; BSPH mean $\geq$ 3.75; Grad mean $\geq$ 4 (high) *Success Indicator*: 80% strongly agree/agree	*Data Source:* Course evaluations* (Q #10) *Data presentation:* Summary report; summary prepared by Data Analytics Team	October Evaluation Workgroup meeting (prior AY)
E1.8. Percent of MPH core courses with grading rubrics	*Data Source:* Core course syllabi *Data presentation:* Summary report; summary prepared by	Associate Dean for Academic Affairs;

Table B5-1 Evaluation Plan		
Evaluation measures	***Identify data source(s) and describe how raw data are analyzed and presented for decision making****	***Responsibility for review***
Success Indicator: 100% of core courses with rubrics	Accreditation Assessment Director	November GPC meeting
E1.9. Percent of students with mean rating of 4 or higher out of 5 from Field Experience Preceptor *Success Indicator*: 80% of students have mean of ≥ 4	*Data Source:* Preceptor Evaluations *Data presentation:* Summary report; summary prepared by Community Engagement staff	Associate Dean for Academic Affairs; February GPC meeting (prior AY)
E1.10. Percent of PhD students submitting a manuscript for publication as co-author by time of dissertation defense *Success Indicator*: 30% with submission	*Data Source:* PhD Program advisors' annual progress report for PhD students *Data Presentation:* Summary report; summary prepared by Track Leads	Faculty at December Track meetings
Education Goal E2: Collaborate with diverse community partners through mutual learning to increase knowledge in order to improve population health and reduce health inequities.		
E2.1. Percent of MPH graduates working in Milwaukee or Wisconsin within 12 months of graduation *Success Indicator*: 50% working in Milwaukee or Wisconsin	*Data Source:* Alumni Survey at 6 and 12 months since graduation *Data presentation:* Summary report; summary prepared by Data Analytics Team	February Evaluation Workgroup meeting
E2.2 Percent of time alumni spend addressing health disparities and health equity *Success Indicator*: 50% working in public sector or for non-profit organizations	*Data Source:* Alumni Survey at 6 and 18 months since graduation *Data presentation:* Summary report; summary prepared by Data Analytics Team	February Evaluation Workgroup meeting
E2.3 Number of courses involving community-based practitioners as presenters annually *Success Indicator*: At least 4 courses with community-based presenters	*Data Source:* Course syllabi *Data Presentation:* Summary report; summary prepared by the Office of Academic Affairs	May Faculty Council meeting
Research Goal #1: Conduct relevant, rigorous and collaborative research that advances public health knowledge and promotes population health and health equity		
R1.1. Percent of faculty with external funding *Success Indicator*: 60% have external funding	*Data Source:* Faculty Performance Survey *Data presentation:* Summary prepared by Faculty Chair and Executive Committee discuss in spring faculty reviews	Executive Committee April Merit Review meeting; Associate Dean for Research, Dean
R1.2. Percent of faculty submitting proposals for external funding *Success Indicator*: 75% submit annually	*Data Source:* Faculty Performance Survey *Data presentation:* Summary prepared by Faculty Chair and Associate Dean for Research	Executive Committee April Merit Review meeting; Associate Dean for Research
R1.3. Number of grant proposals submitted annually	*Data Source:* Faculty Performance Survey; UWM WISPER Data/SOAR	Executive Committee April Merit Review

Table B5-1 Evaluation Plan		
Evaluation measures	***Identify data source(s) and describe how raw data are analyzed and presented for decision making****	***Responsibility for review***
Success Indicator: At least 25 proposals submitted annually	*Data presentation:* Summary report; summary prepared by Faculty Chair and Associate Dean for Research	meeting; Associate Dean for Research
R1.4. Amount of total research funding from external research grants *Success Indicator*: At least $1.5 m in external funding awarded annually	*Data Source:* Faculty Performance Survey; UWM WISPER Data/SOAR; Interim University Business Representative *Data presentation:* Summary report; summary prepared by Faculty Chair and Associate Dean for Research	Executive Committee April Merit Review meeting; Associate Dean for Research
Research Goal #2: Disseminate and translate research findings to influence the development of health- and equity-promoting policies and strategies		
R2.1. Percent of faculty presenting at professional scientific meetings annually *Success Indicator*: 75% present annually	*Data Source:* Faculty Performance Survey *Data presentation:* Summary report prepared by Faculty Chair	Executive Committee April merit review meeting; Associate Dean for Research
R2.2. Percent of faculty publishing in peer-reviewed journals annually *Success Indicator*: 75% publish at least 1 article annually	*Data Source:* Faculty Performance Survey *Data presentation:* Summary report prepared by Faculty Chair	Executive Committee April merit review meeting; Associate Dean for Research
R2.3. Percent of PhD students presenting at a professional scientific meeting by the time of dissertation defense *Success Indicator*: 100% presenting at least 1 time	*Data Source:* PhD Program advisors; annual progress reports *Data presentation:* Summary report prepared by Track Leads	Faculty at December Track meetings
Community Engagement / Service Goal #1: Engage with public health practitioners, policy stakeholders, and community partners through a variety of approaches to improve population health and health equity		
CE/S1.1. Percent of faculty participating in extramural service activities annually *Success Indicator*: 100% participation in extramural service annually	*Data Source:* Faculty Performance Survey *Data Presentation:* Summary report prepared by Faculty Chair	Executive Committee April merit review meeting; Faculty Chair; Community Engagement Staff
CE/S1.2. Number of service activities sponsored by the Public Health Student Association (PHSA) *Success Indicator*: At least 3 community service projects annually	*Data Source:* PHSA Annual Report *Data presentation:* May Annual report prepared by PHSA officers	Faculty Advisor, PHSA; Associate Dean for Academic & Student Affairs
CE/S1.3. Percent of faculty-student service collaborations in Capstone	*Data Source:* MPH Capstone Proposals	November GPC meeting; MPH Director; Associate

Table B5-1 Evaluation Plan		
Evaluation measures	***Identify data source(s) and describe how raw data are analyzed and presented for decision making****	***Responsibility for review***
Success Indicator: 50% of Capstone projects with community partner	*Data presentation:* Summary report prepared by Capstone course instructors	Dean for Academic & Student Affairs
CE/S1.4. Number of community-based projects in courses *Success Indicator*: 3 community-based projects annually	*Data Source:* Faculty Performance Survey *Data presentation:* Summary report prepared by Faculty Chair	Executive Committee in April merit review meeting; Associate Dean for Academic & Student Affairs; Community Engagement Staff
Organization Goal #1: Attract, support, and sustain a diverse student, faculty and staff community to ensure an inclusive and collaborative work environment		
O1.1. Percent of Black, Latinx, Hmong students across degree programs annually *Success Indicator*: 20% of students from priority populations annually	*Data Source:* UWM OAIR data, SOPHAS *Data presentation*: Summary report prepared by Associate Dean for Academic Affairs	December Faculty Council meeting
O1.2. Percent of student, faculty, staff satisfaction with climate re diversity, inclusion, and cultural humility *Success Indicator*: 80% very satisfied/satisfied with climate in school	*Data Source:* Diversity Survey *Data Presentation:* Survey summary report with results prepared by Data Analytics Team	November Evaluation Workgroup meeting; November Dean's Team meeting
Organization Goal #2: Invest in people, resources, and infrastructure to foster excellence and advance the mission of the Joseph J. Zilber School of Public Health		
O2.1. Percent of annual faculty reviews of productivity, relationship of research to instruction *Success Indicator*: 100% have annual reviews	*Data Source:* Faculty Performance Survey *Data Presentation:* Summary report prepared by Faculty Chair	Executive Committee April merit review meeting; Dean
O2.2. Advising ratios by degree level (BSPH, MPH, PhD) *Success Indicator*: BSPH: 34:1 MPH: 5:1 PhD: 3:1 (MPH-MSW and MS Programs are still small)	*Data Source:* Advisor assignment records managed by Undergraduate and Graduate Advisors *Data presentation:* Summary report prepared by Accreditation Assessment Director	November Faculty Track meetings and December Faculty Council meeting

*See ERF B5.1 for the BSPH and Grad course evaluation data for Q1 and Q10.

Measurement of different elements in Education Goal 1 and Research Goal 1 above merit further elaboration. In Education Goal 1, students are assessed in multiple ways on learning related to the science, practice, critical thinking, and leadership skills necessary to promote population health and reduce health inequities. These skills are reinforced across the MPH curriculum in the core, track, Field Experience (APE), and Capstone (ILE) courses. For example, critical thinking is an active, ongoing process throughout the MPH Program. Students are assessed through various

course activities, including papers, projects, proposals, and presentations. The Field Experience preceptors do an evaluation, and a final meeting with the student is encouraged. The faculty advisor and/or course instructor may follow up with a preceptor with questions about a student's performance. Students reflect on their learning in these areas through the Field Experience Final Paper and Capstone Reflection papers as well as the Pre- and Post-Competency Self-Assessments. As to the Competency Self-Assessments, Evaluation Workgroup members noted that the 2018 and 2019 cohorts showed positive change between the Pre- and the Post-Surveys. (See ERF B5.3) The Evaluation Workgroup will be discussing implementation of a system to evaluate specific competencies across courses in each academic year as an additional level of assessment.

At the doctoral level, students demonstrate this learning through the Preliminary Exam, dissertation proposal defense, and dissertation defense. In each of these milestones, faculty are assessing students' performance by providing feedback and critiquing revised drafts. Exams passed, as well as proposals and dissertations defended, are indicators of learning related to science, practice, critical thinking, and leadership.

For Research Goal 1, the Executive Committee considers the relevance and collaborative nature of scholarly activities during the annual spring merit review process. Relevance is measured by publications in peer-reviewed journals and presentations at professional scientific meetings. The collaborative aspect of public health research is measured by the presence of co-authors from a range of partners, including city, regional, state as well as national and international settings. Community engagement on projects with local, regional and state partners is another dimension the Executive Committee values in support of the school's vision, mission and values.

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

The Self-Study process has afforded Zilber School faculty, administration, and staff the time and space to ask questions about processes, gather data, and shore up the feedback loops for decision-making. Faculty approved the Vision Statement (9/20/19) and confirmed the school's goals (2 education, 2 research, 1 community engagement/service, and 2 organization goals). In Accreditation Workgroup discussions, the school affirmed the current governance committee structure in support of the evaluation methods.

The school's progress in advancing the field of public health and promoting student success is discussed in the APC, UPC, GPC Committees, and key highlights and findings are presented in the monthly Faculty Council and Staff meetings. The Faculty Council votes on recommendations related to instruction and student success from the school's standing committees. The Executive Committee focuses on areas of scholarship and service. The Evaluation Workgroup and the Dean's Leadership Team (Faculty Chair, Associate Dean for Research, Accreditation Assessment Director) discuss the school's monitoring processes, following up individually with the Faculty Chair, Associate Dean for Research, and Accreditation Assessment Director based on new information as needed. The Accreditation Assessment Director coordinates meetings with the CHS Director of Performance Analytics, while Students Services staff are responsible for distributing the Competency Self-Assessment, Graduation, and Alumni surveys based on the stated timelines. Academic Affairs staff are responsible for distributing course evaluations each semester. Regular committee, faculty and staff meetings help ensure multiple voices are able to contribute to action plans and changes are communicated. Committees play a key role in using data and implementing appropriate changes, and staff follow up on necessary actions based on minutes and through direct contact.

Due to a variety of factors, including competing priorities, loss of faculty, and illness of the dean, the school has spent limited time on strategic planning. Beginning in the spring 2019 semester and continuing with one Spring 2020 and two Spring 2021 meetings, the Faculty Chairs and

Acting Dean coordinated faculty discussions related to instruction (BSPH accelerated master's degree and BSPH certificate, MPH core curriculum, MPH Capstone), scholarship (grant support), service (Capstone projects with community partners), and overall strategic planning. Faculty are still confirming priorities, which will then need to be aligned with evaluation measures to assure timely feedback on progress and any need improvement actions. The administration and faculty are aware of the importance in continuing this work and sustaining the monitoring work in support of decision-making at all levels.

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.**

Evidence of implementation of the school's evaluation plan include both data collected and examples of plan implementation. Each is discussed below.

DATA COLLECTED

Table B5-2 below presents the school's indicator data for the past three years. Of note is that three programs are new and do not have data for all years. The BSPH Program admitted its first students as transfers to the major in Spring 2019. Of 11 graduates by fall 2021, one enrolled in the MPH Program in Fall 2021. The remaining 10 students have not had 12 months since graduation to be employed or enrolled in a graduate program. The MS Program admitted two students as transfers from the MPH in Biostatistics in Fall 2019. Both are now employed. The MPH-MSW Program enrolled its first students in Fall 2020.

Table B5.2 Zilber School Goals, Measures, Indicators, and Outcome Data, 2018-2021				
Education Goal 1: Educate current and future public health professionals in science, practice, critical thinking, and leadership skills necessary to promote population health and reduce health inequities.				
Measure	**Indicator Target**	**2018-19**	**2019-20**	**2020-21**
E1.1. Percent of students graduating from degree programs in designated timelines	70% BSPH students graduate in 4 years	NA	NA	100%[1]
	70% MPH students graduate in 7 years	75%	70%	88%
	70% MS Biostatistics students graduate in 7 years	NA	50%	100%
	60% PhD students graduate in 10 years	43%[2]	0%[3]	50%[4]
E1.2. Percent of students employed or enrolled in another education program within 12 months of graduation	80% BSPH students employed or enrolled in another education program	NA	NA	NA[5]
	80% MPH students employed or enrolled in another education program	100%	97%	NA
	80% MS students employed or	NA	100%	100%

Table B5.2 Zilber School Goals, Measures, Indicators, and Outcome Data, 2018-2021				
	enrolled in another education program			
	80% PhD students employed or enrolled in another education program	NA[6]	100%	100%[7]
E1.3. Percent of student satisfaction with achieving defined competencies and applying them after graduation	80% MPH graduates very satisfied/satisfied with achieving/applying competencies	NA	86%[8]	NA
E1.4. Percent of student satisfaction with class size	80% BSPH students very satisfied/ satisfied with class size	NA[9]	NA[9]	NA[9]
	80% MPH students very satisfied/ satisfied with class size	NA	41%	95%
E1.5. Percent of student satisfaction with availability of faculty	80% BSPH students very satisfied/satisfied with availability of faculty	NA[9]	NA[9]	NA[9]
	80% MPH students very satisfied/ satisfied with availability of faculty	NA	64%	89%
E1.6. Percent of BSPH and graduate (MPH, MS, PhD) courses in semester with mean ≥ 4 (5-point scale) on Q1-overall quality of course is high	80% BSPH courses with mean ≥ 3.75 on Q1-overall quality of course is high	NA[10]	Fall 2019= 80% Spring 2020=NA[11]	Fall 2020=90% Spring 2021=88%
	80% graduate courses with mean ≥ 4 on Q1- overall quality of course is high	Fall 2018=70% Spring 2019=69%	Fall 2019=76% Spring 2020=NA[11]	Fall 2020=91% Spring 2021=74%
E1.7. Percent of BSPH and graduate (MPH, MS, PhD) courses in semester with mean ≥ 4 (5-point scale) on Q10 - overall rating of instructor is high	80% BSPH courses with mean ≥ 3.75 on Q10 - overall rating of instructor is high is high	NA[10]	Fall 2019=100% Spring 2020=NA[11]	Fall 2020=90% Spring 2021=88%
	80% graduate courses with mean ≥ 4 on Q10 - overall rating of instructor is high	Fall 2018=74% Spring 2019=77%	Fall 2019=69% Spring 2020=NA[11]	Fall 2020=88% Spring 2021=74%
E1.8. Percent of MPH core courses with grading rubrics	100% MPH core courses have rubrics	90%	80%	80%

Table B5.2 Zilber School Goals, Measures, Indicators, and Outcome Data, 2018-2021				
E1.9. Percent of MPH students with mean rating of ≥ 4 (5-point scale) from the Field Experience Preceptor	**80%** of students have mean rating of ≥ 4.0 on work habits and competencies from Field Experience Preceptor	84%	90%	74%
E1.10. Percent of PhD students submitting a manuscript for publication as co-author by time of the dissertation defense	**30%** of PhD students submit a manuscript for publication as co-author by time of the dissertation defense	NA[6]	83%	0%[7]
Education Goal 2: Collaborate with diverse community partners through mutual learning to increase knowledge in order to improve population health and reduce health inequities.				
Measure	**Indicator Target**	**2018-19**	**2019-20**	**2020-21**
E2.1. MPH graduates working in city or state within 12 months of graduation	**50%** of MPH graduates working in Milwaukee or WI	NA[12]	NA	NA
E2.2. MPH graduates working in the public and non-profit sectors addressing health disparities and health equity	**50%** of MPH graduates working in public or non-profit sectors	NA[12]	NA	NA
E2.3. Number of courses involving community-based practitioners	At least **4** courses include community-based practitioners as presenters annually	7	10	11
Research Goal R1: Conduct relevant, rigorous and collaborative research that advances public health knowledge and promotes population health and health equity.				
R1.1. Percent of faculty with external funding	**60%** of faculty have external funding annually	77%	79%	89%
R1.2. Percent of faculty submitting proposals for external funding	**75%** of faculty submit proposals for external funding annually	85%	88%	74%
R1.3. Number of grant proposals submitted annually	At least **25** grant proposals will be submitted annually	47	52	25
R1.4. Total research funding from external research grants	At least **$1.5 million** in external research funding awarded annually[13]	$1.41 million	$1.47 million	$1.07 million
Research Goal 2: Disseminate and translate research findings to influence the development of health- and equity-promoting policies and strategies.				
R2.1. Percent of faculty presenting at professional	**75%** of faculty present at professional	77% (52)	64% (47)	37% (26)

Table B5.2 Zilber School Goals, Measures, Indicators, and Outcome Data, 2018-2021				
scientific meetings annually (# presentations)	scientific meetings annually			
R2.2. Percent of faculty publishing in peer-reviewed journals annually (# publications)	**75%** of faculty publish at least **1** article annually	81% (86)	84% (93)	84% (64)
R2.3. Percent of PhD students presenting at a professional scientific meeting by the time of the dissertation defense	**100%** of PhD students presenting by time of dissertation defense	NA	100%	100%
Community Engagement/Service Goal CE/S1: Engage with public health practitioners, policy stakeholders, and community partners through a variety of approaches to improve population health and health equity.				
Measure	**Indicator Target**	**2018-19**	**2019-20**	**2020-21**
CE/S1.1. Percent of faculty participating in extramural service activities	**100%** of faculty participation in extramural service activities annually	95%	96%	100%
CE/S1.2. Number of service activities sponsored by the PH Graduate Student Association (PHGSA)	**3** PHGSA service activities per academic year	1	0	2
CE/S1.3. Percent of Capstone courses with faculty-student service collaborations	**50%** of Capstone Projects conducted with community partners annually	50%	54%	55%
CE/S1.4. Number of MPH community-based projects annually	**4** MPH community-based projects annually	4	4	3
Organization Goal O1: Attract, support, and sustain a diverse student, faculty, and staff community to ensure an inclusive and collaborative work environment.				
O1.1. Percent of Black, Latinx, and Hmong students per cohort across degree programs	**20%** of students are from racial/ethnic marginalized populations annually	20%	22%	22%
O1.2. Percent of student, faculty and staff satisfaction with climate re diversity, inclusion, and cultural humility	**80%** of students, faculty and staff are very satisfied/ satisfied with climate re diversity, inclusion, cultural humility	NA	NA	85%[14]
Organization Goal O2: Invest in people, resources, and infrastructure to foster excellence and advance the mission of the Joseph J. Zilber School of Public Health.				
O2.1. Percent of faculty with annual reviews of	**100%** of faculty have annual reviews	100%	100%	100%

Table B5.2 Zilber School Goals, Measures, Indicators, and Outcome Data, 2018-2021				
productivity, relationship of research to instruction				
O2.2. Advising ratios by degree level (BSPH, MPH, PhD)[15]	**34:1** student: faculty ratio in BSPH Program for 2 undergrad advisors	NA	NA	31:1
	5:1 student: faculty advising ratio in MPH Program	2.7:1	3.5:1	4.8:1
	3:1 student: faculty advising ratio in PhD Programs	2.5:1	2.7:1	2.7:1

[1]Two students who transferred to the BSPH in Spring 2019 graduated in Fall 2020 (100% in that cohort). Students in the Fall 2019 and 2020 cohorts have not reached the maximum time to graduate (4 years).

[2]Of the eight students in the initial cohort, four withdrew and one transferred to an interdisciplinary PhD program. Seven is used as the graduation rate denominator to account for the transfer. Of the seven, three have graduated.

[3]One student entered the EHS PhD Program in 2010 and withdrew in 2012-13. As no student will graduate in this cohort, the graduation rate is 0%.

[4]This student has been working on the PhD on a part-time basis. Since 2016 the school has provided some tuition waivers. The student achieved dissertator status in May 2017. Due to personal reasons the student's progress has been delayed. The student expects to graduate in May 2022.

[5]The 2020-21 BSPH graduates have not had 12 months in which to find a position in a public health setting.

[6]No PhD students graduated in 2018-19.

[7]One student who graduated in Summer 2021 has been employed as Public Health Supervisor, Public Health Madison Dane County.

[8]Due to staff changes, only data from Alumni Surveys distributed in Spring 2019 and 2020 were available for analysis. These surveys had low response rates. Given the small numbers, aggregated data are presented for 2019 and 2020, as noted in Year 2019-20. Percent of students responding Strongly Agree/Agree to this question: *The competencies I achieved through coursework, the Field Experience, and the Capstone prepared me for working in public health*.

[9]Response rate on BSPH Graduation Survey was too low to report any meaningful data.

[10]As the BSPH Program just started in Spring 2019 with two transfer students, only two major courses were offered in Fall 2018 and three major courses in Spring 2019.

[11]UWM conducted no course evaluations in Spring 2020 due to the COVID-19 pandemic.

[12]Limited alumni and employer information preclude data analysis for these two indicators at this time. These indicators will be addressed during the Evaluation Workgroup discussion about the alumni survey and strategies to update the alumni data base. Another possible source of data would be employer focus groups.

[13]The source of data for research grant expenditures is the Office of Research, research dashboard. The data presented here vary from the data derived from WISER, the source used to report the school's financial data in Table C1-1. It is rare to have the opportunity presented by this self-study process to compare data systems across the Office of Financial Planning & Analysis and the Office of Research.

[14]One item from the question "How true is each of the following statements?" is reported for 2020-21 from the Spring 2021 Diversity Survey. In fact, three items from this question present a more complete picture of students' satisfaction with school climate related to diversity. Among the limitations are that: 1) the items are not specific to diversity, inclusion, and cultural humility, and 2) the items are not indicative of satisfaction. See discussion below in "Promoting Student Success."

[15]The two Biostatistics Track faculty each have two MS students. In the MPH-MSW Program, three CBHP Track faculty each have one student.

Advancing the Field of Public Health

Overall, the Zilber School faculty are productive researchers. While the number of faculty presentations at scientific conferences and number of grant proposals submitted declined during the pandemic, faculty exceeded the benchmarks for publications and percent of faculty having external funding. All of the PhD students who defended in 2019-20 had presented at a scientific meeting by the time of the dissertation defense, and slightly over three-quarters of these students had been a co-author on a manuscript submitted for publication.

In addition, faculty contributed their time and expertise in extramural service activities. Of note is the engagement of multiple faculty during the COVID-19 pandemic with local health departments, the Milwaukee County Office of Emergency Management, and various media outlets. Faculty participate on multiple study sections, review manuscripts, and serve on local, state, and national advisory/association boards. Examples of local groups where faculty contribute their time and expertise include the Fox-Wolf Watershed Alliance Science Advisory Council, Health Compass Milwaukee, the Northwest Fresh Food Access Council, Wisconsin Cancer Council, City of Milwaukee Tobacco-Free Alliance, and the State of Wisconsin Title V Advisory Committee.

Promoting Student Success

Overall, students do well in the programs at the Zilber School. The BSPH and MPH students have met the graduation rate benchmarks. Challenges in the EHS PhD related to fit and personal issues have been or are being addressed. The MPH and PhD students have been successful in finding employment or are enrolled in other advanced education programs. A small sample of employers interviewed spoke positively about the students' preparation. They also identified areas for improvement, including writing and learning how to develop relationships with community partners. While these results are limited in their usefulness for making generalizations, the topics of writing and community relationships resonate with anecdotal conversations with preceptors and colleagues nationally at schools of public health.

In both the BSPH and MPH Programs, the variation in mean ratings for quality of the course and instructor can be explained in part by the mix of faculty. Recent faculty sabbaticals and faculty losses have resulted in additional affiliate and ad hoc faculty teaching. The hiring of two new lecturers, a visiting assistant professor, and a tenure-track assistant professor will help stabilize the teaching quality over time. The Faculty Chair and Dean will continue to work on instructor stability and professional development.

In general MPH students perform well in their Field Experiences. In 2020-21, 74% of students received a mean rating $\geq$ 4 on the preceptor evaluations, slightly below the target of 80%. The Field Experiences were virtual, and students were balancing competing demands. Communication with preceptors was also harder.

Turning to the school climate regarding diversity, inclusion, and cultural humility, while students rated as True the statement that they were satisfied with their experience at the Zilber School, results from the Spring 2021 Diversity Survey revealed areas for improvement. Students and faculty respondents expressed concerns about belonging to the school community. In addition, slightly over three-quarters of students and a little over half of faculty respondents rated as true that the school provides an environment for the free and open expression of ideas, opinions, and beliefs. Students identified social issues including religion and immigration/citizenship as not being adequately addressed in public health courses. An important step will be the comparison of the 2018 and 2021 Diversity Survey data. Finally, experience with the 2018 and 2021 surveys has highlighted the need for additional review of the Survey instrument to clarify the

purpose of each question and adopt language that is specific to diversity, inclusion, and cultural humility.

The creation of a new position in Academic Affairs and the Graduate Advisor position will help provide additional support for student services. In addition, the Self-Study process has highlighted several areas of improvement related to curriculum, data management, and diversity and inclusion.

EXAMPLES
The following examples from instruction and research illustrate implementation of the school evaluation plan. See ERF B5.3 for documentation including meeting minutes, reports, and the PhD Progress Form.

Instruction

1. The Community Engagement staff presented preceptor evaluation data for four years (2016-17, 2017-18, 2018-19, and 2019-20) at the 11/25/19 GPC meeting. Committee members raised questions about some of the formulas that had been used to analyze data from the preceptor evaluations and recommended different approaches to the analysis. Community Engagement staff have had limited time to conduct a more thorough analysis. Now, with this input from the GPC, they plan to work with the Evaluation Workgroup and the College of Health Sciences Data Analytics team to implement a comprehensive system for analysis of these data. The goal is to present an update from the preceptors' evaluations at the June 2022 Preceptors event.

   Throughout this period, Community Engagement staff have used feedback from the preceptors' evaluations to inform both the orientation and required first semester Field Experience Workshop. Among topics they have highlighted are taking initiative, communicating in timely ways, practicing presentations, and paying attention to the details.

2. The GPC conducted an audit of PhD Town Hall sessions. This process included time for the tracks to review their actions and identify any gaps. Faculty advising emerged as an issue for improvement. The GPC developed a PhD Student Progress Form, which was discussed by the tracks. GPC and Faculty Council voted in May 2021 to approve a form for advisors to monitor student progress for consistency across the four PhD programs. See ERF B6.1 for meeting minutes and the PhD Progress Form.

Research

3. Key indicators for research productivity, including proposals submitted, external funding, and publications and presentations, are all addressed during the EC annual review process, as documented by the Faculty Performance Survey (see ERF B5.3). These reviews became part of the merit review process for the 2019-21 biennial Compensation Plan.

   Regarding research funding, our total research revenue was very close to our target of $1.5 million per year for FY19 and FY20 (within $90,000 of that goal each year), whereas in FY21 our research revenue was not what we had projected. This decrease in FY21 was primarily due to two factors: faculty who have departed, some of whom had active funding that went to their new institutions; and the COVID pandemic, which slowed expenditures on some community-based projects. We are implementing strategies to increase our funding again, including hiring tenure track faculty when possible, fostering collaborations with other departments and institutions, and strengthening services to increase support for faculty both pre- and post-award. These services include grant application editing support and consultation, bibliographic support, a grant budgeting workshop conducted by SOAR, and arranging for external reviews of larger grant applications as well as providing grant management consultation and guidance for newer PIs. Several faculty are involved in COVID related research grants now, and we are hopeful the pandemic situation improves soon to allow more robust activity in currently funded community-based research projects. Despite

this recent decrease, our research remains impactful in the community, and students continue to benefit from participation on faculty research teams.

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

Strengths

- Faculty and administration focus on streamlining evaluation measures and indicators to reflect priorities for instruction, scholarship, service, and student success
- Implementation of collaboration with College of Health Sciences Office of Performance Analytics Director
- Identification of staff positions (one of the Professional Advisors, new Academic Affairs admin position) with focus on Academic Affairs and data collection and management

Challenges

- Development of a systematic and efficient process to collect data for evaluation purposes
- Development of a comprehensive linked archival data management system
- Limited time since initial accreditation for school-wide strategic planning to define short- and long-term goals and integrate activities with the school's evaluation plan
- Variation in campus data sources related to research revenue and expenditures

Plan

- Continue collaboration with CHS Office of Performance Analytics to maintain data flow
- Enhance feedback loops with committees and Faculty Council with use of data dashboards
- Use feedback from CEPH's review of the self-study report and site visit to guide and inform future evaluation efforts and quality improvement activity
- Investigate why campus data sources produce somewhat different numbers for research grant income and expenditures and select the data source that depicts our indicators most clearly

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.**

   Three specific examples of programmatic changes made in the past three years are presented below.

   EXAMPLE #1: Development of the MS in Biostatistics
   Biostatistics faculty began thinking about the development of the MS in Biostatistics based on two findings.
   Evaluation findings: (1) colleagues at other schools of public health informed faculty that the MS in Biostatistics was a more popular degree than the MPH in Biostatistics and that the job market for an MS in Biostatistics was stronger than for an MPH; and (2) Several MPH students in Biostatistics expressed the desire for a MS in Biostatistics option to their advisors. These students were interested in the focus of the MS degree on the development of biostatistics-specific skills rather than on a broad background in public health more appropriate to the MPH.
   Group/individuals responsible for determining the planned change: Biostatistics faculty initiated the process for the creation of a new degree. They prepared the campus Entitlement to Plan (ETP) document for the MS in Biostatistics; Faculty Council approved ETP on 1/31/2017. The Biostatistics faculty then prepared the requisite Authorization to Implement (ATI) documentation for University and UW-System wide adoption of the MS in Biostatistics. This included competency formation and mapping and curriculum development. Faculty Council approved ATI on 11/30/2018. The UW Board of Regents approved the new MS in Biostatistics degree on 6/7/2019.
   Planned change: Since the launch of the MS in Biostatistics in Fall 2019, we have enrolled five students, and two students have successfully completed their training. One student started the MS in Biostatistics in Fall 2021.

   EXAMPLE #2: Audit – Findings and Recommendations from PhD Programs Feedback/Town Hall Process
   The PhD student-faculty feedback process in Spring 2020 led to an audit of the PhD Town Hall process for 2017-2020. Due to COVID-19, the student-faculty PhD Town Hall was not held. Based instead on the spring 2020 PhD Student survey, two faculty members of the Graduate Program Committee (GPC) proposed the creation of a PhD Program Director position (3/21/20) for "supporting and overseeing the doctoral program, conducting evaluation and improvement efforts, and responding to PhD student concerns raised during the 'town hall' process." The GPC approved a motion to create this position at its April meeting (4/27/20). However, at the first meeting in AY 2020-21, the Faculty Council did not pass a motion to create this position (9/18/20). Instead, faculty proposed that GPC conduct an audit of prior PhD Town Hall findings and faculty responses to determine the extent to which student concerns were being addressed.

   At the 10/13/20 GPC meeting, GPC members agreed that a GPC faculty member and the PhD student representative would conduct the audit of PhD student surveys and Town Hall responses for 2017-2020. They also agreed to share audit findings with PhD students and the Associate Dean of Academic and Student Affairs. They reported their findings at the 11/13/20 GPC meeting. Working with Academic Affairs staff and Track Leads, the GPC confirmed the status of each concern raised by the doctoral students. Two findings stood out as needing further attention. One

finding addressed PhD advising, while the second finding focused on pre-dissertation research credits.

Evaluation finding: Advising – inconsistent support and responsiveness across doctoral programs and no sustained corrective action taken; development of advising policy still going from 2019; and student progress letter not yet developed.
Group/individual responsible for determining the planned change: GPC
Planned change: GPC developed an annual PhD student progress form that will standardize advising and document PhD student milestones and progress at the end of each academic year; approved on 5/11/21; Faculty Council approved on 5/21/21. See ERF B6.1 for the minutes from the GPC and Faculty Council meetings.

Evaluation finding: Lack of clarification about when and how students earn pre-dissertation research credits; audit confirmed that in February 2020, in response to discussion with PhD students that month, CBHP faculty had written updated language for the 2019-2020 Student Handbook and created a learning agreement for students to submit to their advisors.
Group/individual responsible for determining the planned change: CBHP Track faculty
Planned change: CBHP Track faculty wrote a policy for the Student Handbook (see pages 62-64 for the policy and Learning Agreement Form) that described when and how students earn the research credits and distributed it to all CBHP doctoral students. Students also received a draft of the Pre-dissertation Research Credits Learning Agreement.

As part of the audit process, PhD students were notified of progress on the audit (Letter dated October 28, 2020) and received final documents, including summaries of themes, faculty actions, and a final version summarizing input from the faculty. The Associate Dean for Academic and Student Affairs, meanwhile, is reviewing the audit findings and will decide how the roles and responsibilities of a PhD Program Director that fit into the program director definition will be carried out by the PhD programs. This effort will result in a document linking the roles and responsibilities related to each PhD program to a specific responsible party, we anticipate this document will be available to share with the faculty, staff, and doctoral student body by the end of the 2021-22 academic year.

See ERF B6.1 for the GPC (3/21/20, 4/27/20, 10/13/20), 11/13/20) and Faculty Council (9/18/20) minutes and the PhD Town Hall Audit materials.

EXAMPLE #3: MPH Core Courses
Evaluation finding: Concern with class size and availability of MPH core courses; student input in course evaluations and Town Hall meetings in Spring 2018, 2019, 2020, 2021
Group/individuals responsible for determining the planned change: Academic Affairs Staff, Faculty Chair, Faculty Council
Planned change: Initially the decision was made to offer the core courses twice in the same semester to accommodate class speakers. Beginning in Fall 2017, PH 706 Perspectives in Community and Behavioral Health Promotion was offered twice, and in Spring 2018 PH 703 Environmental Health Sciences and PH 705 Public Health Policy and Administration were offered twice. Based on student feedback following that academic year, the Graduate Program Manager recommended that core courses be offered at different times, and ultimately, in different semesters. Beginning in Fall 2019, some of the core courses were offered twice each year, and by Fall 2020, PH 704 Principles and Methods of Epidemiology was also offered once each semester. This change has been implemented over several academic years, and delivery of the core continues to be an important factor in course scheduling.

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

Strengths

- Examples highlight a process for review and action to implement a desired change based on student input
- Committee structures in place to support evaluation plan

Challenges

- Development of a systematic and efficient process to collect data for evaluation purposes
- Development of a comprehensive linked archival data management system
- Development of an effective communication system among committees and administration to ensure dissemination of information and development of responses to address identified challenges
- Need to evaluate and update the systems to collect the data and information for monitoring our objectives due to rapid growth in programs

Plan

- Implement improved data collection and archival systems
- Generate and disseminate outcome measures on a regular basis to identify strengths and gaps using dashboard
- Use feedback from CEPH's review of the self-study report and feedback from site visit to guide and inform future evaluation efforts and quality improvement activity

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:**

   The University of Wisconsin – Milwaukee relies on a system of fund accounting to produce a record of its financial affairs. The basic premise of fund accounting is that funds are received for specific purposes and are budgeted and spent accordingly. The operating budget reflects a plan of spending consistent with a legislatively derived and collegially confirmed sense of purpose.

   The University receives two major sources of funding: student tuition and state appropriations (taxpayer support). These funds are centrally pooled in General Purpose Revenue Funds 101 and 131. UWM allocates funds to each academic unit from this pool through a Budget Model calculation using student credit hours, research metrics and degrees granted. This calculation and the resulting allocation to the schools and colleges is reviewed annually by campus leadership, and any adjustments are made based on strategic imperatives. Once the Zilber School's final allocation is determined, these funds are not further allocated to departments within the School.

   In addition to the significant allocation of funding described above, the Zilber School receives minor funding from the various ancillary revenue streams listed here and described further below:

   Building Rental – Zilber rents a portion of the building for events, and these program revenue funds are recognized in Fund 136.

   Grant Funding – Zilber has several faculty Principal Investigators whose grants may include partial salary recovery. This funding is recognized in Funds 133 and 144.

   Indirect Cost Returns – Grants return a portion of expenditures as indirect cost returns that are recognized in Fund 150.

   Distance Education Fees. – online or hybrid courses assess an additional fee on a credit basis; these fees are recognized in Fund 131.

   Special Course Fees - – certain courses may assess specific additional fees to cover costs outside of the classwork, and these campus-approved costs are recognized in Fund 131.

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

      All individual faculty salaries are tracked and paid through tuition and other revenue dollars disbursed from the Zilber School's 101 fund. Some faculty have external grants that cover a percentage of their salary, typically in the form of course-buy-outs. The Zilber School does not have a formal expectation of salary recovery from grant activity.

   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.**

      Additional faculty and staff are requested by the Dean through the Office of the Provost via a documented review and approval process which includes criteria, rationale, and budgetary considerations.

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

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

Operational costs for the Zilber School are budgeted and funded during the annual campus budgeting process described above. Operating costs, referred to as "supplies and expenses" ("S&E"), include all period costs except 1) compensation and benefits of faculty and administrative staff, and 2) capital and rental costs. Examples of costs included under S&E are marketing, recruiting, membership fees, travel, supplies, and equipment. Compensation and benefits of faculty and administrative staff are funded as described above.

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

The Zilber School funds student support primarily through donor-provided scholarships. We also support students through the school's indirect cost returns and S&E funds.

With respect to funding support from major donors, the Zilber School received about $650,000 in Academic Years 2017-21 from major donors for start-up and scholarships. We award significant scholarships from our donors every year to students at each degree level. For example, for AY2021-22, $29,000 in scholarships was accepted by BSPH students, $58,750 by MPH students, and about $144,000 by PhD students. Most of this scholarship money is awarded via merit-based scholarships; however, we are able to offer limited emergency assistance through our donor funds as well.

We also award the Chancellor's Graduate Student Awards (CGSA) from our School's indirect cost returns. This is a $20,000 per year commitment to talented graduate students. In AY 2020-21, we awarded summer bridge funding in the amount of $5,000 each to four exceptional doctoral students. We have not awarded the CGSA for AY 2021-22. The application deadline is February 1, 2022.

Funds are also allocated through the School's S&E and indirect cost returns to support students in a number of ways. The Zilber School's S&E is used to support a limited number of Teaching Assistantships, Program Assistantships, and student hourly positions. Typically, the School also funds a limited number of registration fees for students to either the state or national public health conferences from S&E. Indirect cost returns are used to fund a limited number of student activities such as bringing in outside speakers.

There is also some campus-level support for student conference travel (e.g., via the Graduate School: Graduate Student Travel Awards). Some student activities are funded through the money the student association is allocated by campus.

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

Faculty development expenses are funded through a variety of sources including the Zilber School's fund 101 tuition and other program revenues as well as fund 150 grant indirect cost returns. Faculty may also fund professional development and travel through grant funds and their individual indirect cost returns.

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

In general, additional funds are requested by the Dean through the Office of the Provost via a documented review and approval process which includes criteria, rationale, and budgetary considerations.

The Zilber School also obtains funds in the following two ways:

Building Rental
The Zilber School receives revenue from fees charged for events held in the building by internal and external organizations. This revenue varies by year. A forecast of the anticipated building rental revenue is included in the annual budget building process. Since Spring 2020, revenues in this fund have been lower than expected due to the pandemic. Use of this revenue is at the unit's discretion and would typically be used for operating costs or student support.

Grants/Contracts
Individual faculty may receive funding from federal and non-federal sources. The funds are allocated to an internal Zilber School account called Fund 144 for federal grants and Fund 133 for non-federal grants. The faculty member may fund student support or faculty development with the grant or the associated indirect cost recovery. As noted in C1.f below, the Zilber School also receives a portion of the indirect cost recovery on awarded grants. While this money can be used to cover general operating costs, there is an effort to use it to bolster the research support and productivity in the school.

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.

Student Tuition

Undergraduate tuition revenue
Undergraduate tuition revenue from state appropriations and student tuition is pooled and distributed based on the following formula, using a two-year average in each case: i. 70%: Undergraduate credits conveyed, ii. 10%: Undergraduate Degrees granted, and iii. 20%: Research Activity.

Graduate tuition revenue
Graduate tuition revenue is unlike undergraduate revenue in that there is no state appropriation, and the revenue is solely from graduate student enrollments. Graduate tuition revenue is estimated during the prior year based on historical performance and known changes to programs, the fee structure, and anticipated changes in enrollment. Graduate tuition is then allocated during the budget process as a result of this calculation. Graduate tuition is adjusted three times during the year in the fall and spring and finally summer based on actual enrollments.

Special course fees
Special Course Fees are specifically assessed on students by instructors and are designed to cover the exact cost of items required by a course but outside the usual tuition structure. These fees are essentially a 100% pass through of costs. These costs are specifically reviewed and approved by Campus for validity and funded in a specific account in Fund 131. The Zilber School currently has three courses with special course fees (PH 346 Environmental Health and Disease, PH 702 Introduction to Biostatistics, and PH 703 Environmental Health Sciences).

Distance education fees
The Zilber School earns funding through distance education fees. Prior to FY21, these fees were determined by the Zilber School and charged to students above the tuition rate for online class fees. The fee for the online version of PH 101 Introduction to Public Health is $275. We do not regularly offer other online classes (pre-pandemic). For FY21 the Distance Ed Fee across campus was reduced to $10 per credit in consideration of the number of online courses due to remote learning and to address students' financial hardship caused by the pandemic. For FY22 the per credit rate was increased to $30 across campus. The Zilber School receives 100% of this fee. These funds are deposited into Fund 131.

The Zilber School does not receive a portion of the other fees paid by students directly, such as the segregated fees charged by campus.

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.

Indirect Cost Recovery
The Zilber School receives a return of 80% of grant indirect costs from eligible grants. Of this amount, the school transfers 12.5% (or 10% of the total indirect received by UWM) to individual faculty accounts in support of their individual research. The school retains the remaining 67.5%. These funds are deposited into an internal Zilber School account called Fund 150.

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.

The five years presented in Table C1-1 incorporate a number of significant factors as described below.

Tuition and Fees includes the full campus allocation as described above. Tuition and fees have been negatively impacted by decreasing state support to the campus as well as a freeze on our ability to raise in-state undergraduate tuition rates. This has been partially offset by any increase in graduate enrollments, the addition of an undergraduate program, and any increases in campus support.

Grants and contracts revenues and expenses reflected here are derived from our financials reporting system called WISER. As such, revenues are amounts billed and received against a grant and expenses are the actual recorded expenses. While these amounts should reconcile at the completion of the grant, there will be timing differences within any given year. It should be noted that through the self-study process, it came to light that campus data sources vary somewhat in the research revenue and expenditures domain. For example, the data derived from WISER varies slightly from the data derived from the Research Dashboard (reported in Table B5.2/R1.4). It is rare to have the opportunity to compare data systems across the Office of Financial Planning & Analysis and the Office of Research. We plan to examine the differences in these data systems.

Indirect cost recovery has increased and then stabilized over the past five years. Some of the increase reflects a change in how indirect cost returns were distributed to units starting in 2020.

Gift revenue is typically less than $50,000 per annum except in 2019. The dollar amount shown for gifts in 2019 reflects a $500,000 pledge payment from the Zilber Family Foundation towards the Vera Zilber Public Health Scholars Fund.

Other (consulting & rentals) is largely comprised of the rental of portions of the Zilber School facility and has been detrimentally affected by the COVID pandemic such that the $100,000 annual run rate was essentially quartered for FY2021.

Salaries and benefits were stable for 2017 through 2020, where fluctuations represent regular changes in headcount and compensation rates. In 2021, however, the pandemic on top of budgetary pressures forced a hold in pay plan increases as well as campus-wide and position specific furloughs. Additionally, the Zilber School had six faculty departures in 2020-2021.

Similarly, operations and travel expenses required to support the daily operations of the school decreased by approximately 25% in 2021 due to the negative impact of the pandemic and the resulting expense avoidance and deferral strategies deployed by the school and campus.

Note that the financial performance of any specific year should not necessarily be viewed in isolation as there are a number of overlapping factors. Tuition revenues are not directly tied to compensation nor changes in headcount and are on different cycles with different timeframes. Grant revenues and expenses along with the corresponding indirect cost returns are not necessarily constrained within one fiscal year. Furthermore, the UW Milwaukee campus adjusted the Indirect Cost Return calculation during the review period so that the percentage retained at the school as revenue increased as well as the obligation to spend against that revenue. Gift revenue and foundation scholarships move on their own cycle time and are not linked. The combination of all of the above factors results in the financial health of the school being cumulative and measured over an extended period.

See Table C1-1 on next page.

Table C1-1					
Sources of Funds and Expenditures by Major Category, 2017 to 2021					
	2017	**2018**	**2019**	**2020**	**2021**
Source of Funds	7/1/2016-6/30/2017 (16-17)	7/1/2017-6/30/2018 (17-18)	7/1/2018-6/30/2019 (18-19)	7/1/2019-6/30/2020 (19-20)	7/1/2020-6/30/2021 (20-21)
Tuition & Fees	$4,929,988	$4,897,542	$5,157,718	$4,946,669	$4,574,158
Grants/Contracts	$1,283,479	$1,283,624	$1,190,891	$1,515,108	$1,341,462
Indirect Cost Recovery	$48,296	$77,036	$116,336	$271,555	$218,481
Gifts	$0	$48,548	$548,995	$21,826	$30,979
Other (consulting & rentals)	$106,607	$109,815	$117,154	$58,092	$21,128
Total	**$6,368,371**	**$6,416,565**	**$7,131,094**	**$6,813,250**	**$6,186,208**
Expenditures					
Faculty Salaries & Benefits	$5,395,519	$4,982,873	$4,803,208	$5,075,931	$4,516,977
Operations[1]	$361,632	$575,856	$341,937	$381,459	$313,062
Travel	$89,043	$107,211	$116,127	$99,360	$22,435
Other (foundation scholarships)	$5,171	$93,724	$86,596	$127,800	$341,698
Other (Grants/Contracts expenses)	$1,223,589	$988,709	$1,491,884	$1,515,108	$1,164,098
Total[2]	**$7,074,954**	**$6,748,373**	**$6,839,752**	**$7,199,658**	**$6,358,270**

1. Note that where Indirect Cost Return revenues are specifically identified on a separate line, the corresponding expenses are presented within the “Operations” line.
2. The difference between the total of fund sources and expenditures total does not represent the net financial position at year-end.

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.**

   The Zilber School experienced the loss of eight faculty in 2020-21 and at the beginning of the 2021-22 academic year. This challenge resulted in a search during Summer 2021 for three lecturers to teach primarily in the BSPH and MPH Programs. Two people were recruited to join the permanent faculty for AY 2021-22. Two additional people were contracted to join the faculty specifically for AY 2021-22. Regarding permanent replacements for these two positions, one visiting assistant professor position has been filled with the contract beginning in AY 2022-23. A search for a tenure-track faculty position in the PHPA Track is underway with the selected person to start in August 2022. Table C2-1 below reflects the current and new faculty.

Table C2-1 Zilber School Faculty Academic Year 2021-2022						
	FIRST DEGREE LEVEL			SECOND DEGREE LEVEL	THIRD DEGREE LEVEL	ADDITIONAL FACULTY+
CONCENTRATION	PIF 1*	PIF 2*	FACULTY 3^	PIF 4*	PIF 5*	
Biostatistics MPH, MS, PhD	Spencer Huang 1.0	Shengtong Han 1.0	Nour Taha 1.0	Keith Dookeran 1.0		PIF: Non-PIF: 2
Community and Behavioral Health Promotion MPH, PhD	Young Cho 1.0	Paul Florsheim 1.0	Amy Harley 1.0	Emmanuel Ngui 1.0	Lance Weinhardt 1.0	PIF: 2* Non-PIF: 3
Environmental Health Sciences MPH, PhD	Amy Kalkbrenner 1.0	Michael Laiosa 1.0	Todd Miller 1.0	Kurt Svoboda 1.0		PIF: Non-PIF: 1
Epidemiology MPH, PhD	Keith Dookeran 1.0	Lorraine Halinka Malcoe 1.0	Amanda Simanek 1.0	Ellen Velie 1.0		PIF: Non-PIF: 2
Public Health Policy and Administration MPH	Phoenix Do 1.0	Linnea Laestadius 1.0	Renee Scampini 1.0	Loren Galvao** 1.0		PIF: Non-PIF: 1
Bachelor of Science in Public Health Generalist	Young Cho 1.0	Michael Laiosa 1.0	Lorraine Halinka Malcoe 1.0	Renee Scampini 1.0	Musa Yahaya 1.0	PIF: 7 Non-PIF: 1
TOTALS:	Named PIF	21				
	Total PIF	21***				
	Non-PIF	10				

*1 PIF is Spring 2022 only
**Fall 2021 only
***While 22 individuals were PIF; 1 person was Fall 2021 only and 1 person was Spring 2022 only resulting in 21 total PIF

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.**

Based on campus policies, one course is equivalent to 12.5% FTE.

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

With the new Lecturers joining the school in Fall 2021, the Zilber School meets the minimum number of Primary Instructional Faculty (PIF) with 21. Of the 10 non-PIF faculty, two are permanent full-time academic staff members, two are affiliate faculty from the College of Nursing, and one is an ad hoc instructor who recently received the doctorate in CBHP. Five are public health professionals locally and nationally. In addition, two doctoral students taught in AY 2021-22. A CBHP doctoral student was the instructor for the PH101 Introduction to Public Health course in the BSPH Program, while a PhD student in the Biostatistics concentration teaches the PH 702 Introduction to Biostatistics Lab.

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

Table C2-2 presents the Zilber School's advising data for AY 2020-21. The school's chosen point-in-time for establishing advising numbers was four weeks into the semester, around the time of fall semester advising meetings.

Two professional advisors advise the BSPH students. They provide assistance with course selection, direct students to resources for any financial or personal challenges and offer advice about career options. Community Engagement staff assist students with finding placements for the BSPH integrative experience (PH 600).

Faculty advising for the MPH integrative experience occurs in the Capstone course. Students prepare their Proposals in the semester before the Capstone course. As such, faculty advising spans two semesters.

Table C2-2. Faculty regularly involved in advising, mentoring and the integrative experience, 2020-21			
General advising & career counseling			
Degree level	**Average**	**Min**	**Max**
Bachelor's (2 Professional Advisors)	31	29	34
Master's -- MPH, MPH-MSW	5.05	1	11
MS – Biostatistics	1	1	1
Doctoral	3	1	7

Advising in MPH integrative experience		
Average	**Min**	**Max**
2	1	5
Supervision/Advising of bachelor's cumulative or experiential activity		
Average	**Min**	**Max**
4	2	5

Mentoring/primary advising on thesis or dissertation			
Degree	**Average**	**Min**	**Max**
PhD (4 programs)	3	1	4
MS Biostatistics	1	1	1

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

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

The school administers Graduation Surveys to students in the BSPH and MPH Programs. BSPH students received the survey toward the end of their final semesters. Unfortunately, the response rate was too low to report any meaningful data. Only three of nine graduating seniors in 2020-21 completed the Survey. The Survey was not connected to a specific course. The UPC discussed how to improve the response rate during the Fall 2021 semester and decided to link future BSPH Graduation Surveys to the PH600 course.

MPH students receive the Graduation Survey during the Capstone semester. Based on experience with low response rates for this survey, the course instructors added points to the Capstone grading plan beginning in Spring 2020. The response rate for the Spring/Summer 2020 graduates was 81% (22/27), and the response rate for the Spring 2021 graduates was 70% (19/27).

The survey question that addresses class size in relation to quality of learning asks students to rate their overall satisfaction with the quality of 11 items, including class size. Data are presented in Table C2.5.a as percent satisfied (defined as Very Satisfied and Satisfied using a 5-point Likert Scale) for graduates in Spring/Summer 2020 and Spring 2021.

Table C2.5.a Percent of MPH Student Satisfaction with Class Size in Relation to Learning among 2020 and 2021 Graduates		
Item	**2020 Graduates (N=22)**	**2021 Graduates (N=19)**
Satisfaction with class size in relation to quality of learning	41%	95%

The low percent satisfaction for 2020 graduates may be attributed to the COVID-19 pandemic. Like other campuses across the country, UWM closed down in March 2020, with

classes resuming online. Students may have been reacting to the abrupt change in their education experience.

At this time the school does not collect data on class size from MS and PhD students.

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

As noted above, the response rate on two BSPH Graduation Surveys was too low to report any meaningful data.

For MPH students, the item "Availability of faculty" is part of the section with 11 items that asks students to rate their overall satisfaction. Data are presented in Table C2.5.b as percent satisfied (defined as Very Satisfied and Satisfied) for graduates in Spring/Summer 2020 and Spring 2021.

Table C2.5.b Percent of MPH Student Satisfaction with Availability of Faculty among 2020 and 2021 Graduates

Item	2020 Graduates (N=22)	2021 Graduates (N=19)
Satisfaction with availability of faculty	64%	89%

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

The Graduation Survey did not include an open-ended question regarding student perceptions of class size and availability of faculty. The Evaluation Workgroup will review the Graduation Survey during the Spring 2022 semester and recommend revisions as needed.

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

Strengths

- School has required 21 minimum Primary Instructional Faculty
- Community Engagement staff support faculty in placements for the BSPH integrative experience and the MPH applied practice experience (Field Experience)
- Engaging local public health professionals and alumni as ad hoc instructors

Challenges

- Advising load uneven across programs with reduced faculty (e.g., range of 1-11 students in MPH Program)
- Low response rate on BSPH Graduation Survey
- Lack of open-ended questions in MPH Graduation Survey in general and related to overall satisfaction with 11 items including class size and availability of faculty
- Lack of data regarding class size and availability of faculty from MS and doctoral students

Plan

- Discuss approaches for faculty advising with reduced faculty number and in Capstone course
- Revise BSPH Graduation Survey administration to occur in PH600 course
- Review and revise MPH Graduation survey to include open-ended questions
- Add questions about class size and availability of faculty to the course evaluations to capture student perspectives across all degree programs (BSPH, MPH, MPH-MSW, MS, PhD)

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.**

Table C3-1. Staff support 2021-22	
Role/function	**FTE**
Interim Unit Business Representative (UBR)	.2
Business Operations Manager	1
Human Resources Business Partner*	.4
Administrative Coordinator (vacant)	1
Faculty Support Specialist	1
Student Services Coordinator**	.25
Graduate Advisor/Recruiter	1
Admissions Lead	.5
UG Academic Advisor/Recruiter	2
Administrative Program Specialist	1
Accreditation Director	1
Community Engagement Coordinator	1
Sr Communications Executive***	.5
Sr Development Specialist****	.2
Interim Financial Specialist	.375
Sr Grant Specialist*****	.22
IT Specialist******	.1-.25

**Campus HR Shared Services; shared position with College of Health Sciences*
***Position is 1.0 FTE but currently vacant; Assistant Dean for Student Services (R Jens) filling in at .25 FTE temporarily; search is awaiting reorganization planning*
****Shared position with University Relations and School of Education*
*****Shared position with College of Nursing*
******Position is 1.0 FTE but currently vacant; existing positions within Shared Office for Administration of Research (SOAR) covering load temporarily; search launched in Fall 2021 for permanent 1.0 FTE Grant Specialist*
*******Position works in Zilber School two days a week; FTE varies based on projects and workload*

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

UWM is adopting the shared services delivery model for many of the business services across campus. Having Human Resources, Information Technology, Marketing and Communications, Finances, and Grant Administration shared with other colleges and schools enables us to maximize all available resources in those business areas. The shared positions also create many opportunities to collaborate with the College of Nursing and College of Health Sciences. Although

the six positions presented above are part of the shared services model, they each provide the Zilber School with the commitment needed to carry out its mission and goals.

While the Senior Grant Specialist is full-time with Zilber School, the position is part of the SOAR team doing pre- and post-award grant work for four units. The uniqueness of this structure facilitates faculty access to an array of resources.

Through a contract with the College of Letters and Science an IT consultant is in the school building two days a week. Faculty and staff may also reach the IT Specialist at other times via email. Additional IT support is available anytime through the campus University Information Technology Services office.

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

The current school staff and other support personnel are sufficient to meet the school's mission. The addition of two new positions in Academic Affairs have strengthened the school's delivery of student services and enhanced faculty's advising time for the Field Experience, Capstone, and career advising.

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

Strengths

- Shared HR (HUB), research (SOAR), finance, development, marketing/communications personnel models
- Access to expertise across Partners for Health (CHS, CON)
- Solid structure and staffing plan in the Office of Academic & Student Affairs
- Filled new Academic Affairs administrative position
- Restructured temporary position in Academic Affairs to permanent graduate recruiting/advising position; filled position in Fall 2021

Challenges

- Shared Services Model not easily able to accommodate variations in processes to meet the Zilber School's business needs; "One size doesn't fit all"
- Student Services Coordinator position being held open pending reorganization discussions. Assistant Dean for Student Services from College of Nursing (Robin Jens) helping out on a temporary basis.

Plan

- Work with Student Services leads across health schools to plan how to best structure student services after the reorganization. Proposal will determine whether Zilber School's Student Services Coordinator position is filled as written or restructured.

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.)**

The Zilber School's space reflects its broad learning, research, and community engagement goals. The space is used for traditional, modular, computer-based, and laboratory classrooms; faculty offices; student, post-doctoral and research scientist space; and wet and dry lab research space.

In the main school building in the Pabst Brewery complex, the Zilber School has 28,087 ASF for classrooms, seminar rooms, a computer lab with 40 stations, faculty and staff office space, a teaching kitchen, and various other rooms. The space includes kitchen/sitting areas on Floors 2-5, a lactation room, and a meditation room. Wireless Internet access is available throughout the building for faculty, staff and students through their campus passwords, for tenants with their IDs, and for visitors through the UWM guest connection.

The Zilber School's downtown location offers a unique place to host community events. The Collaborating Commons on the fifth floor was designed with this convening space in mind. The furniture can be easily moved around to accommodate group work, and the sound, audio and projection technology is state-of-the-art. The Zilber School has sponsored gatherings for a range of partners, including campus entities, the city's Office of Violence Prevention, the Milwaukee Area Health Education Center (AHEC), and Data You Can Use, which has its offices in the building.

In Summer 2015, the Zilber School moved into the fifth floor of the KIRC building on the main campus with approximately 12,000 square feet for Environmental Health Sciences (EHS) wet labs, a Biostatistics dry lab, and faculty and graduate student offices. EHS faculty members are allocated primary office spaces in KIRC and touchdown space in the Zilber School. A few faculty members also have offices in the KIRC based on their research.

A unique feature of the school space in the KIRC is the Teaching Lab (Room 5155; 1770 square feet). The room includes four 60-inch monitors as well as student workstations. From 2016-19, EHS faculty taught non-lab environmental health courses there. The first undergraduate course was offered there in fall 2019.

The KIRC space is also home to the school's undergraduate advisors. As the BSPH is based on the main campus, the students and advisors are in close proximity to each other. The advisors have a main office as well as a smaller, private office for advising that meets FERPA requirements (Rooms 5090A and 5090).

- **Faculty office space**

  Faculty offices are located both on the 3rd and 4th floors of the main building in The Pabst Brewery and on the 5th floor of the KIRC building on main campus. All faculty members are assigned their own private office in one of these two locations. Faculty have access to drop-down stations in the building that does not house their private office.

- **Staff office space**

  Staff offices are located on the 5th floor of the main school building in The Pabst Brewery. All staff members are assigned private offices in this area. In addition, advising staff have

offices and advising space in the KIRC on the main campus. Student workers in the BSPH Program also have access to a workspace with a PC computer in the main office.

- **Classrooms**

  In the Zilber School building, classrooms are located on the first, second, and fifth floors. In addition, conference rooms on the third and fourth floors may also be used for classes. Classrooms and conference rooms have projection and audio systems with state-of-the-art equipment. Additionally, classrooms are equipped with modular furniture to accommodate various styles of teaching (lecture/panel presentation, seminar, small groups).

  In the KIRC, the Teaching Lab (Room 5155) has been equipped to teach the Environmental Health and Disease course (PH 346). In addition to four 60-inch wall monitors, the room has 10 student workstations, each of which include a PC computer, a monitor, a Zeiss 308 stereomicroscope, and a Zeiss 208 digital camera that interfaces with the computer. Three other workstations have similar equipment, incorporating Zeiss 508 microscopes instead of the Zeiss 308 microscopes. A high-end PC computer (from Kurt Svoboda's Laboratory) is used to process images and project anatomical images in 3 dimensions. The adjoining Room 5195 serves as a laboratory prep room and has been outfitted with equipment and supplies necessary to run the Teaching Lab. The room includes incubators, a small freezer, and a small refrigerator. Consumable supplies needed to run the laboratory portion of PH 346 are stored in room 5195. The PH 346 lecture/lab course was first offered in spring 2020. Due to the Covid-19 pandemic, the in-person components of PH 346, including laboratory exercises, ended on March 12th, 2020.

  We also access campus General Assignment classrooms, especially for our undergraduate classes. For these classroom assignments, we are often in KIRC, the Lubar School of Business, or the Northwest Quad.

- **Shared student space**

  There are several shared student spaces throughout the two buildings. In the main school building, the atrium lobby and second-floor kitchen and seating area are accessible to students. There is also a student computer lab on the second floor. In addition, every PhD student is assigned a cubicle workspace on the 3rd floor. These are usually shared between two students and provide a more private space to work. Also on the 3rd floor is the Public Health Student Association (PHSA) Clubhouse (Room 392). The PHSA team and other students can congregate here in a non-academic setting. PHSA also makes coffee and printing available to students.

  On the 4th floor of the main building are the Collaboration Spaces. These are shared spaces where students work on research with faculty members. They act as a home base for a team of students working under a supervising faculty member.

  On the 5th floor of the main building there is a space with cubicles designated for students. These are unassigned stations where any student can sit and work in a more private space.

  In the KIRC building on main campus, there are several drop-down spaces where students, RAs, and TAs can have a cubicle space to work. A number of these are assigned to specific doctoral students working with faculty in the KIRC laboratories. The other spaces are unassigned and available for general student use.

- **Laboratories, if applicable to public health degree school offerings**

State-of-the-art lab equipment located in KIRC

Fluorescence activated cell sorter
All program faculty and students have access to the fluorescence activated cell sorter (FACS) facility located in Dr. Michael Laiosa's laboratory. It features a dedicated fluorescence activated cell sorter (BD FACS Aria III). The FACS Aria is equipped with four lasers (405 nM violet, 488 nM Blue, 561 nM Yellow/Green, and 633 nM Red lasers), four way sorting capacity and an automated cell deposition unit (ACDU) capable of sorting a single cell into an individual well on 96 well plate. Finally, the FACS Aria is equipped with a forward scatter photomultiplier tube for resolution and sorting capacity of small particles such as bacteria less than 3μM in diameter.

Analytical Laboratory
All program faculty and students have access to the Analytic Laboratory under the direction of Dr. Todd Miller. The Miller laboratory features the AB Sciex 4000 qTrap. This hybrid triple-quadrupole/linear ion trap system is a high sensitivity, bench top hybrid triple quadrupole-Linear Accelerator trap mass spectrometer designed for LC/MS/MS analyses. The instrument provides an uncompromised combination of Linear Accelerator trap and triple quadrupole functionality, uniquely allowing both qualitative and quantitative analyses to be carried out in a single experiment. Various compound libraries are available for fast method development and screening of samples for unknown compounds. A Shimadzu Prominence HPLC is attached to the mass spectrometer and consists of a three-channel inline membrane degasser, two single isocratic pumps with mixing chamber, an autosampler that can accommodate several vial sizes and titer plate formats for high speed, accurate, and precise HPLC sample injection, a column oven, and system controller. The entire LC/MS/MS system is run by the latest version of the AB Sciex Analyst software. In addition, the analytical laboratory contains a Dionex Ion chromatograph DX-120 with AS40 autosampler, an Agilent 5890 gas chromatograph with Electron Capture Device and Flame Ionization Detector. Additional instrumentation is provided by the Institute for Drug Discovery Mass Spectrometry facility located three floors below the EHS laboratories.

Microscopy Laboratory
All program faculty and students have access to the Core Microscopy Laboratory under direction of Associate Professor Kurt Svoboda. The Svoboda laboratory has specific space dedicated to microscopy and image analysis. Main equipment items include a Zeiss inverted microscope (Axio-observer), which is equipped with an ApoTome and an ORCA ccd camera (Hamamatsu). It has a 40x water objective, a 25x water objective, and two 20 x dry objectives (0.8 and 0.6 NA). The microscopy laboratory also contains a Nikon microscope (AZ100) as well as a Zeiss ZV16 fluorescent stereomicroscope equipped with an ApoTome, motorized stage and an ORCA ccd camera. Two PCs (independent of the acquisition computers) are dedicated to image processing and 3D rendering. The software package being utilized for the image processing is Imaris (Bitplane).

Other State-of-the-art lab equipment located on the UWM campus

UWM's High-Performance Cluster Computing Service (HPC Cluster Service)
The UWM HPC Service provides powerful computational resources to UWM researchers and their student assistants. Established in 2009, the services currently support research clusters called "AVI" and "Mortimer" and a small educational cluster called "Peregrine."

One large HPC research cluster, known as Avi, has 142 nodes, each with 8 Intel Nehalem cores (1,136 cores in total) and 24 gigabytes of memory per node (3 gigabytes

per core). Avi also offers a high-throughput, low-latency Infiniband network for optimal performance in message-passing programs. Avi specifications include:

- 142 compute nodes (1136 cores total). Each node is a Dell PowerEdge R410 rack-mount server with two quad-core 2.67 GHz Intel Xeon X5550 processors and 24GB of system memory.
- One LSF scheduling node, a Dell PowerEdge R710 server, with two quad-core 2.67 GHz Intel Xeon E5520 processors and 24 GB of system memory.
- One IO node, a Dell PowerEdge R710 server, with two quad-core 2.67 GHz Intel Xeon E5520 processors and 24 GB of system memory.
- 7 Dell PowerVault MD1000 3Gb/s SAS attached expansion units providing 80TB of RAID 60 and RAID 10 storage. This storage is available to all nodes via NFS.
- Each node has both a Qlogic DDR InfiniBand (16Gb/s) and a gigabit ethernet network interface.

The larger "Mortimer Faculty Research Cluster" includes 1924 total computing cores and 7488 GiB (7.3TiB) RAM. Mortimer specifications include:

- 28 standard compute nodes, each with 16 cores and 48 GiB RAM (448 cores and 1344 GiB RAM total). Each node is a Dell PowerEdge R420 server with two 8-core Intel(R) Xeon(R) CPU E5-2450 v2 processors @ 2.50GHz
- 55 standard compute nodes, each with 24 cores and 64 GiB RAM (1320 cores and 3520 GiB RAM total). Each node is a Dell PowerEdge R430 server with two 8-core Intel(R) Xeon(R) CPU E5-2680 v3 processors @ 2.50GHz
- 4 high-memory compute nodes, each with 24 cores and 256 GiB RAM. Each high-memory node is a Dell R630 with 3 8-core Intel(R) Xeon(R) CPU E5-2680 v3 processors @ 2.50GHz
- 1 high-memory compute node with 32 cores, 768 GiB RAM, and a local 17TiB RAID. 4 Intel(R) Xeon(R) CPU E5-2650 v2 processors @ 2.60GHz
- 1 high-memory compute node with 32 cores, 768 GiB RAM, and a local 1TiB RAID. 4 Intel(R) Xeon(R) CPU E5-2680 v3 processors @ 2.50GHz
- 1 visualization node with 16 cores, 64 GiB RAM and two AMD Opteron(tm) 4386 Processors.
- One head node running the SLURM resource manager, a Dell PowerEdge R415 server with 1 6-core AMD Opteron(tm) 4133 processor and 16GiB of RAM. An identical backup node automatically takes over in the event of a head node failure
- 10 high-speed I/O nodes, each a Dell PowerEdge R720xd serving a single 19 TiB RAID over NFSv4 with write speeds up to 800 MiB/sec from compute nodes over the Infiniband network
- 7 high-speed, high-capacity I/O nodes, each a Dell PowerEdge R720xd serving a single 37 TiB RAID over NFSv4 with write speeds up to 800 MiB/sec from compute nodes over the Infiniband network
- All compute and I/O nodes are linked by Mellanox FDR Infiniband (56Gb/s) and gigabit Ethernet networks Avi and Mortimer Common Specifications
- All nodes currently run the latest CentOS Linux 6
- Hundreds of open source packages installed via the pkgsrc package manager
- Many commercial software packages (mostly licensed to individual research groups or colleges)
- Intel compiler suite available to all users

The educational cluster, known as Peregrine, has 8 nodes, each with 12 AMD Opteron cores (96 cores total), and 16 gigabytes per node (1.33 gigabytes per core). Peregrine is available to all UWM students for course work and independent research projects. Peregrine specifications include:

- 8 compute nodes (96 cores total). Each node is a Dell PowerEdge R415 rack-mount server with two six-core AMD Opteron 4180 2.6GHz processors and 32 GB of system memory.

- One head node, a Dell PowerEdge R415 server, with one 6-core AMD Opteron processor and 16 GB of system memory.
- The head node houses a 5 Terabyte RAID5 array, available to all compute nodes via NFS.
- All nodes are connected by a dedicated gigabit ethernet network interface.
- Jobs are scheduled using the Portable Batch System (PBS).
- In addition, Peregrine is a submit node and manager for the UWM Condor grid, which provides access to hundreds of idle cores on lab PCs around campus for use in parallel computing.

UWM Biotechnology Facility

The EHS Program also has access to the UWM Biotechnology facility located in Lapham Hall. The facility, housed in the Department of Biological Sciences, is equipped with instruments for conducting chromatin immunoprecipitation, microarray analyses, ultra-high-speed centrifuges, HPLC and FPLC chromatography, temperature-controlled incubator/shakers, and high-throughput PCR cyclers.

Animal (mice) Facility

The Association for Assessment and Accreditation of Laboratory Animal Care/AAALAC-accredited vivarium is maintained by the UWM Animal Resources Center. The Center provides both animal husbandry and veterinary care services (24 hours per day, 365 days per year) by a board-certified laboratory-animal veterinarian. The Laiosa laboratory maintains a breeding colony of transgenic mice in an individual 250 sq. ft. room within the vivarium. Space is available to add outbred CD-1 mice, to be purchased from the Jackson Laboratories. Transgenic and outbred animals will be utilized in portions of the course-based research experiences. All animal breeding and experimental records are maintained utilizing the Jackson Animal Laboratory mouse colony database program. The database is backed up daily to a secure server.

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

Currently the Zilber School has sufficient physical space in the KIRC on campus and The Pabst Brewery building downtown. The EHS labs have state-of-the-art equipment for faculty research and undergraduate teaching. Faculty and staff offices are adequate, and classrooms and the Computer Lab accommodate the student body. As undergraduate and graduate enrollments increase over the next two to three years, advising space in the KIRC and classroom space in the Zilber School building will be tighter. Anticipating changing space needs across the campus, leaders are conducting a space audit for future planning.

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

Strengths

- Development of Teaching Lab in KIRC
- State-of-the-art EHS Lab space in KIRC

Challenges

- Limited advising and student space in KIRC for growing BSPH program
- Increasing funding for ongoing maintenance of lab equipment

Plan

- Monitor lab equipment, space, faculty and staff needs both in KIRC and the Zilber School building as enrollments and research portfolio grow

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**

  Funds from both external sources and the Golda Meir Library are committed in support of the Zilber School. The Dr. Richard Foregger Research Fund, which generates about $10,000 per year, is intended to support online resources for public health in perpetuity. Other library funds are received through the Graduate School via a percentage of indirect costs from the University's research grants. The indirect funds from the Graduate School support online resources, the Open Access Authors' Fund for OA publications available through the UWM Digital Commons, and document delivery. The libraries could realize more funds as the Zilber School's research portfolio expands, providing greater support for library resources.

  The Zilber School also benefits from such library initiatives as the cooperative programs with area academic and research institutions. Cooperative agreements for library resources exist with the Medical College of Wisconsin, Marquette University, and UW System libraries, which will facilitate Zilber School faculty and student access to resources in the biomedical and basic science areas.

  Students may access library resources remotely from home and in the Zilber School building. In addition, they may use physical materials, programs, and spaces of The UWM libraries in the Golda Meir Library on the Kenwood campus as well as on the Waukesha, and Washington County campuses. The Health Sciences Librarian leads a session during new student orientation each fall and in January 2021 for the first spring MPH cohort. Prior to the pandemic, the librarian held weekly office hours on-site in the Zilber Building, which will resume in 2022.

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

  Computer Lab: The 40-station computer lab is on the second floor of the Zilber School. Students have access to this lab at all times with their IDs. Faculty also reserve the space for specific classes. These computers have statistical packages including SAS, SPSS and Stata, ArcGIS, Cygwin, R, and R-Studio, as well as the Microsoft Office Suite.

  Teaching Lab: The EHS Teaching Lab in the KIRC has 10 student workstations, each of which includes a PC computer, a monitor, a Zeiss 308 stereomicroscope, and a Zeiss 208 digital camera that interfaces with the computer. Four wall monitors facilitate projection of images from the lab experiments. A high-end PC computer on a separate workstation (from Kurt Svoboda's Laboratory) is used to process images and project anatomical images in three dimensions.

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

  Faculty have computers in their offices. They also have access to specific software based on their research needs. The school's IT consultant is available to assist with any hardware or software issues. Classrooms are equipped with whiteboards as well as AV and computer technology.

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

  The Zilber School faculty and staff have access to regular IT support. Through a contract with the College of Letters and Science an IT consultant is in the school building two days a week. This arrangement is expected to resume in the fall when the school complies with the required UWM campus protocols. Additional support is available anytime through the campus IT office.

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

   Access to information and technology resources is sufficient. The building has Wi-Fi, and faculty and staff have computers and appropriate software for their work. Students, meanwhile, have access to software through their personal computers and in the computer lab. Software can also be accessed remotely on a personal device. Class presenters and visitors are able to access the Wi-Fi via the campus guest network.

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

   Strengths
   - Strong computer resources (High Performance Cluster computing on campus)
   - Strong library resources
   - Computer Lab upgrades completed

   Challenges
   - No significant challenges identified

   Plan
   - Continue to review technology resources periodically

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.**

Table D1-1 Content Coverage for MPH Degree	
Content	**Course number(s) & name(s) or other educational requirements**
1. Explain public health history, philosophy and values	PH 704 Principles/Methods of Epidemiology PH 705 Public Health Policy & Administration PH 706 Perspectives in Community/Behavioral Health
2. Identify the core functions of public health and the 10 Essential Services	PH 705 Public Health Policy & Administration
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PH 702 Introduction to Biostatistics (QUANT) PH 704 Principles/Methods of Epidemiology (QUANT) PH 733 Overview of Qualitative Methods for Public Health (QUAL)*
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	PH 706 Perspectives in Community/Behavioral Health
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PH 704 Principles/Methods of Epidemiology PH 706 Perspectives in Community/Behavioral Health
6. Explain the critical importance of evidence in advancing public health knowledge	PH 702 Introduction to Biostatistics PH 704 Principles/Methods of Epidemiology PH 705 Public Health Policy & Administration PH 706 Perspectives in Community/Behavioral Health
7. Explain effects of environmental factors on a population's health	PH 703 Environmental Health Sciences
8. Explain biological and genetic factors that affect a population's health	PH 703 Environmental Health Sciences
9. Explain behavioral and psychological factors that affect a population's health	PH 706 Perspectives in Community/Behavioral Health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	PH 704 Principles/Methods of Epidemiology PH 705 Public Health Policy & Administration PH 706 Perspectives in Community/Behavioral Health
11. Explain how globalization affects global burdens of disease	PH 703 Environmental Health Sciences

Table D1-1 Content Coverage for MPH Degree	
Content	**Course number(s) & name(s) or other educational requirements**
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health)	PH 703 Environmental Health Sciences

*PH 733 Overview of Qualitative Methods for Public Health is a required course for MPH-MSW students in the CBHP Track. However, this course number was approved after the initial MPH-MSW Catalog listing was created. Campus requires a Program Change Form to update the requirement in the CourseLeaf Curriculum Software System (CIM). Zilber School faculty approved the Program Change Form on 12/22/21. The course PH 733 will appear on the MPH-MSW Program Requirements/Credits and Courses page this summer when updates in CIM are processed.

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.**

See ERF D1.2 for the course syllabi below covering the Foundational Knowledge Objectives and sample assessments.
PH 702 Introduction to Biostatistics
PH 703 Environmental Health Sciences
PH 704 Principles/Methods of Epidemiology
PH 705 Public Health Policy & Administration
PH 706 Perspectives in Community and Behavioral Health
PH 733 Overview of Qualitative Methods in Public Health

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

The MPH core courses, required of all MPH students, adequately cover all twelve foundational public health learning objectives.

Strengths

- Foundational public health learning objectives are covered
- Many of the objectives are covered in multiple required courses

Challenges

- Some of the environment-focused objectives are only covered in the environmental core course rather than threaded through multiple courses

Plans for improvement

- Continue to engage in continuous quality improvement for the MPH core courses

D2. MPH Foundational Competencies

The school documents at least one specific, required assessment activity (eg, component of existing course, paper, presentation, test) for each competency, during which faculty or other qualified individuals (eg, 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 (eg, 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 Zilber School offers the MPH degree in five tracks and in the coordinated public health/social work program. The curriculum requirements for each of the tracks are clearly presented in the links below. All students meet the Foundational Competencies through the MPH core curriculum (24-25 credits). MPH-MSW students meet the CBHP Track competencies. These links are to the UWM Academic Year 2021-2022 Course Catalog.

   - Biostatistics: https://catalog.uwm.edu/public-health/public-health-biostatistics-mph/#requirementstext
   - Community and Behavioral Health Promotion: https://catalog.uwm.edu/public-health/public-health-community-behavioral-promotion-mph/#requirementstext
   - Environmental Health Sciences: https://catalog.uwm.edu/public-health/public-health-environmental-sciences-mph/#requirementstext
   - Epidemiology: https://catalog.uwm.edu/public-health/public-health-epidemiology-mph/#requirementstext
   - Public Health Policy and Administration: https://catalog.uwm.edu/public-health/public-health-policy-administration-mph/#requirementstext
   - Coordinated Master of Public Health and Master of Social Work: https://catalog.uwm.edu/public-health/public-health-mph-social-work-msw/#requirementstext

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.**

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
Evidence-based Approaches to Public Health		
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	PH 704 Principles/Methods of Epidemiology	*Content*: covered in Weeks 4,8-14 (Syllabus, pp. 3-6) *Assessment*: Group Project/ Presentation: Each group (5-6 students) chooses a public health problem of interest in Milwaukee, describes why this problem can be considered a health inequity, identifies descriptive displays of data documenting that it is a health inequity, and recommends a public health initiative that could ameliorate the inequity. Each group gives a 20-minute PowerPoint presentation. Students receive an individual score on their presentation, along with peer and group scores.
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	PH 702 Introduction to Biostatistics (QUANT)	*Content*: covered in Week 4 (Chapter 3; Syllabus: pp. 3, 9; Producing data: introduction to sampling *Assessment*: Homework #4 due in Week 5; Syllabus: p. 9. Students choose a quantitative study article and write a critique of the selected data collection method, addressing the following questions: Is the explanation for the selected data collection method justified? Based on the study limitations, how might this method have affected the study results? Provide a rationale for selecting another data collection method based on the context of the public health issue addressed in the study.
	PH 733 Overview of Qualitative Methods in Public Health* (QUAL)	*Content*: covered in Weeks 7-9 (Syllabus: pp. 10-11) *Assessment*: The Why and How paper; Weeks 7,12; Syllabus: p. 10-12) and Assignment Guidelines, p. 1-4; in 3–4-page paper, students identify quantitative methods research study with public health focus, determine qualitative research question, choose a data collection method, and provide rationale for each element.
3. Analyze quantitative and qualitative data using biostatistics, informatics,	PH 702 Introduction to Biostatistics (QUANT)	*Content*: Labs; project assigned in Week 8; presentations in Week 15 (Syllabus: pp. 3, 9)

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
computer-based programming, and software, as appropriate		*Assessment*: Students find available data to answer questions of their own design (download one of the homework problem data sets or a public health data set, e.g., NHANES, BRFSS for their final project). Students are required to use statistical calculations, calculations and graphics generated by SAS software, and make statistical inferences. The analyses are then shared in the final presentation and paper.
	PH 733 Overview of Qualitative Methods in Public Health* (QUAL)	*Content*: covered in Week 11 (Data analysis/representation; coding; Syllabus, p. 11); Assignment Guidelines, pp. 5-7 *Assessment*: students watch a video on NVivo and respond to questions in a paper. They also post in the Discussion board on definitions, the value of using qualitative software, and specific features that would be beneficial for the qualitative analysis. In addition, students comment on posts of two other students.
4. Interpret results of data analysis for public health research, policy or practice	PH 704 Principles/Methods of Epidemiology (RESEARCH)	Lab 13 is an article critique assignment: students answer several questions about a selected epidemiologic article that allows them to demonstrate knowledge of concepts related to epidemiologic theories of disease distribution, measures of association, study design, confounding, causal inference, selection and information biases, and applications of epidemiology to overall public health and health equity promotion.
	PH 705 Public Health Policy & Administration (POLICY/PRACTICE)	Policy Topic Assignment C / Policy Recommendation Brief - Week 11. Students are required to provide evidence to support their policy recommendations (interpretation of prior literature/data analysis).
Public Health & Health Care Systems		
5. Compare the organization, structure and function of health care, public health and regulatory	PH 708 Health Systems and Population Health	*Content*: covered in Weeks 3, 4, 11, 12 (Syllabus: pp. 8-9, 11) *Assessment*: Group project analysis of international intervention and proposal for adoption in US with paper and

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
systems across national and international settings		presentation -Weeks 5,7,10,13. Paper includes 1) analysis of selected intervention in its original international context, i.e. the non-US jurisdiction where it has been implemented; 2) systematic comparison in a target US context of the state of similar intervention(s), if any, to the international intervention analyzed above; and 3) development of a plan for adopting a version of the international intervention or otherwise improving the implementation and delivery of the intervention in target US context (e.g., across the US, in a particular state, or in local settings). Syllabus: pp. 3-4 and pp. 13-14 (Appendix A)
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	PH 705 Public Health Policy & Administration	*Content*: covered in Weeks 1-2, 4 (Syllabus: pp. 6-7) *Assessment*: Policy Topic Paper Assignment A / 4-5-page description of: 1) public health relevance of selected problem, 2) magnitude and scope of the problem in the population and location of choice (local, state, or national), and 3) the social, economic, and environmental determinants of the problem, including the impact of structural bias, social inequities, and/or racism on the creation and perpetuation of the problem. (Weeks 4,10; Syllabus: pp. 7,9)
Planning & Management to Promote Health		
7. Assess population needs, assets and capacities that affect communities' health	PH 703 Environmental Health Sciences	WI-Environmental Health Problem and Solution Group Project - Weeks 5, 10, 13; Syllabus, pp. 11-14. Student teams charged with identifying a current environmental health problem in Wisconsin. Teams will be expected to document the evidence for the problem, identify the susceptible population(s), and develop an appropriate prevention strategy. Students also address the needs of the population affected by the problem and consider local assets and capacities. Teams will be expected to present and defend their proposal in a poster format that will be critiqued by fellow students who will be playing the

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
		roles of potentially impacted community members to include affected members of the community, government officials and corporate interests.
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	PH 706 Perspectives in Community and Behavioral Health Promotion	Week 4; Online Exercise #3; 16-question quiz/reflection based on readings and 2 videos. Examples of questions include: Reflecting on Coreil, Ch. 9, compare and contrast the terms race and ethnicity; and What types of actions or competencies reveal cultural humility to you?
9. Design a population-based policy, program, project or intervention	PH 705 Public Health Policy & Administration (POLICY)	Policy Topic Assignment B / Identification of Policy Alternatives - Week 7. In this assignment students are developing policy ideas as they propose their alternative policies, which they have to describe and provide supporting evidence.
	PH 706 Perspectives in Community and Behavioral Health Promotion (PROGRAMS)	Program application poster and presentation: consideration of problem & context, risk factor analysis, & draft interventions objectives - Weeks 3,6,11,14-15 (pp. 6-10 in Assignment Guidelines packet)
10. Explain basic principles and tools of budget and resource management	PH 706 Perspectives in Community and Behavioral Health Promotion	Concept Check #8 (Week 10, Syllabus, p. 11) covers the following readings on budget: • Breny, J.M, Fagen, M.C, & Roe, KM. (2017). Chapter 6: Implementation Tools, Program Staff, and Budgets. In Fertman, CI & Allensworth, DD, eds. *Health Promotion Programs: From Theory to Practice*, 2nd Edition. San Francisco, CA: Jossey-Bass. • Community Tool Box. (n.d.). Chapter 43: Managing Finances/Section 2: Managing Your Money. Retrieved on 12/12/2021 from https://ctb.ku.edu/en/table-of-contents/finances/managing-finances/manage-money/main • Sohn, H., Tucker, A., Ferguson, O., Gomes, I., & Dowdy, D. (2020). Costing the implementation of public health interventions in resource-limited settings: A conceptual framework. *Implementation Science*,

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
		15(1), 1-8. See ERF D2.3 for Concept Check #8
11. Select methods to evaluate public health programs	PH 706 Perspectives in Community and Behavioral Health Promotion	Concept Check #9 (Week 11, Syllabus p. 11) covers the following readings on program evaluation: • Dake, JA, Jordan, TR. (2017). Chapter 10. Evaluating Health Promotion Programs. In Fertman, CI & Allensworth, DD, eds. *Health Promotion Programs: From Theory to Practice*, 2nd Edition. San Francisco, CA: Jossey-Bass. • McKenzie, JF, Neiger, BL, Thackeray, R. (2016). Chapter 13. Evaluation: An Overview. In *Planning, implementing, and evaluating health promotion programs: A primer*. 6th ed. London: Pearson Education See ERF D2.3 for Concept Check #9
Policy in Public Health		
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence	PH 705 Public Health Policy & Administration	Policy Topic Assignments C / Policy Recommendation Brief - Week 11; AND E: Policy Implementation & Evaluation Strategy - Week 15. Students consider political feasibility as part of the policy-making process.
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes	PH 705 Public Health Policy & Administration	Policy Topic Assignment D / Advocacy - Week 13. The paper includes stakeholder analysis and modified Midwest Academy Strategy charts.
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations	PH 705 Public Health Policy & Administration	Policy Topic Assignment D / Advocacy - Week 13
15. Evaluate policies for their impact on public health and health equity	PH 705 Public Health Policy & Administration	Policy Topic Assignment E / Policy Implementation & Evaluation Strategy - Week 15

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
	PH 708 Health Care Systems and Population Health (as of Fall 2021)	Assessment: Group project analysis of international intervention and proposal for adoption in US with paper and presentation -Weeks 5,7,10,13. Paper includes 1) analysis of selected intervention in its original international context, i.e. the non-US jurisdiction where it has been implemented; 2) systematic comparison in a target US context of the state of similar intervention(s), if any, to the international intervention analyzed above; and 3) development of a plan for adopting a version of the international intervention or otherwise improving the implementation and delivery of the intervention in target US context (e.g., across the US, in a particular state, or in local settings). Syllabus: pp. 3-4 and pp. 13-14 (Appendix A)
Leadership		
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	PH 791 Leadership in Public Health	*Content*: two leadership interviews at Field Experience placement and covered in in-class presentation and case (Syllabus: pp. 3-5; 11/12/19, 7/7/20, 10/27/20, 7/6/21; 10/19/21) *Assessment*: Write a 3-4 page paper applying leadership principles related to visioning, empowering, collaborating, and decision-making to the identified strategies and/or approaches for a case study on COVID-19 mitigation strategy recommendations in the context of ongoing protests spurred by the death of George Floyd that were happening throughout Milwaukee in June 2020. Reflect on who from the health department staff would need to be involved and what you might consider in empowering them to think and act in the best interest of the department. Discuss what factors were considered in deciding about partners who would be involved in collaboration to address this case and whether all partners would share the same vision and perspective about the issue. Discuss what factors were important in weighing the decision about the approach to the issue and reflect on the community and

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
		stakeholder response your decision might generate.
17. Apply negotiation and mediation skills to address organizational or community challenges	PH 791 Leadership in Public Health	*Content*: covered in in-class presentation with group discussion of principles and skills and salary negotiation role playing through scenario in public health lab (9/29/20, 7/27/20, 7/20/21, 11/16/21); syllabus, pp. 3-5. See ERF D2.3. *Assessment*: students write 3-4-page paper reflecting on their negotiating role in the in-class/online role-playing activity and the entire process from the theory presented to preparation and through negotiation and hopefully an agreement. Please include your initial definition of negotiation. How did your definition change after the session? Consider your preparation and the subsequent negotiation. Describe what worked well for you and what you would do differently to prepare and negotiate. Why? What factors influenced your effectiveness throughout the process? Why? What skills would you want to develop further, and how might you do that?
Communication		
18. Select communication strategies for different audiences and sectors	PH 706 Perspectives in Community/ Behavioral Health	Health Communications critique & presentation – Weeks 13-14, Syllabus, p. 12 (Assignment Guidelines Packet, pp. 7-8 and Health Communication Critique Assignment Grading); See ERF D2.3
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	PH 705 Public Health Policy and Administration (WRITING)	Policy Topic Assignments C / Policy Recommendation Brief – Week 11
	PH 706 Perspectives in Community and Behavioral Health (ORAL PRESENTATION)	Program Application Poster, Weeks 3, 6, 11, 15; Syllabus, pp. 8-12. See Assignment Guidelines Packet, pp. 3-6, and Poster Rubric, ERF D2.3
20. Describe the importance of cultural competence in communicating public health content	PH 706 Perspectives in Community and Behavioral Health	*Content*: covered in Weeks 5, 11-12 (Syllabus: pp. 9, 11) *Assessment*: Health communications critique of a fear-based health message; considering the intended audience, how well did the message creators demonstrate cultural humility?

Table D2-2 Assessment of Competencies for MPH (all concentrations)		
Competency	**Course number(s) and name(s)***	**Describe specific assessment opportunity[n]**
		How well did they address message dissemination considerations including message source and message accessibility? Evaluate effectiveness of the message and make recommendations to improve it. (Assignment Guidelines Packet: pp. 9-10; Syllabus: pp. 6,11; Week 15-presentation)
Interprofessional Practice		
21. Perform effectively on interprofessional teams	PH 791 Leadership in Public Health	*Content*: covered in presentation and COVID-19 case session (7/21/20; 10/13/20; 7/13/21, 11/2/21); included discussions on roles and responsibilities and case in small groups of nursing, occupational therapy, physical therapy, and public health students (Syllabus: pp. 3-5) *Assessment*: write a 3-4-page paper based on the discussion in your small group and with the whole group, with reference to the group's assessment of the main decision points and overall team process for the COVID-19 case. Was the outcome regarding discharge planning, long-haul symptoms, and community issues including availability of vaccines what you expected? If not, why? Reflecting on the process, what did the other health profession roles (i.e., physical therapy and nursing and/or social work) contribute that added to your role? For example, think about unique knowledge, skills, language, and perspectives that you didn't have in your role and how those points enhanced the outcome. Were there any particular barriers or synergies within your team? In what approach or action did the group find common ground? Finally, what aspects of interprofessional teamwork struck you as especially significant in the context of the COVID-19 case small group discussion and whole group discussion afterwards?

Systems Thinking		
22. Apply systems thinking tools to a public health issue	PH 705 Public Health Policy & Administration	Policy Topic Assignments A / Problem Definition & Determinants - Week 3; AND E: Policy Implementation & Evaluation Strategy - Week 15

*PH 733 Overview of Qualitative Methods for Public Health is a required course for MPH-MSW students in the CBHP Track. However, this course number was approved after the initial MPH-MSW Catalog listing was created. Campus requires a Program Change Form to update the requirement in the CourseLeaf Curriculum Software System (CIM). Zilber School faculty approved the Program Change Form on 12/22/21. The course PH 733 will appear on the MPH-MSW Program Requirements/Credits and Courses page this summer when updates in CIM are processed.

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.

See ERF D2.3 for course syllabi below listed in Table D2-1.
PH 702 Introduction to Biostatistics
PH 703 Environmental Health Sciences
PH 704 Principles/Methods of Epidemiology
PH 705 Public Health Policy & Administration
PH 706 Perspectives in Community and Behavioral Health
PH 708 Health Systems and Population Health
PH 733 Overview of Qualitative Methods in Public Health
PH 791 Leadership in Public Health

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

Strengths

- Foundational competencies are covered

Challenges

- No significant challenges identified

Plan

- Continue to engage in continuous quality improvement for the MPH core courses through Graduate Program Committee (GPC) and Faculty Council

D3. DrPH Foundational Competencies (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 (eg, 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.**

   The five tables here present competencies and assessments for each of the five MPH Tracks. Students in the coordinated MPH-MSW degree follow the CBHP Track competencies as currently all the enrollments are in this Track. Students may also choose the PHPA Track. Through the self-study process, we realized that the track listing was inconsistent across the UWM Catalog and the school website. Campus requires a Program Change Form to update this information in the CourseLeaf Curriculum Software System (CIM). Zilber School faculty approved the Program Change Form on 12/22/21. The track options will appear in the Catalog on the MPH-MSW Program Requirements/Credits and Courses page this summer when updates in CIM are processed.

Table D4-1.1 Assessment of Competencies for MPH in Biostatistics Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity1**
1. Translate research objectives into testable hypotheses.	PH 711 Intermediate Biostatistics	*Content:* Weeks 7, 16, Course project, syllabus p.3 *Assessment:* Students complete a data analysis project with several scientific questions after the first midterm exam 6. Students select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH 711 but can improve model fitting. The report is written in a form that a non-statistician collaborator can understand. In the report, the student clearly writes the method they used and the interpretation of their results. Students will have an oral presentation of their project at the end of the semester. The peer review for classmates' projects is part of each student's report.

Table D4-1.1 Assessment of Competencies for MPH in Biostatistics Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity1**
2. Demonstrate a broad knowledge and understanding of statistical techniques used in public health studies and health-related scientific investigations.	PH 711 Intermediate Biostatistics	*Content:* Weeks 7, 16; Syllabus pp. 3, 5-6; homework sets and Mid-term, Week 6, syllabus, p. 5 *Assessments:* Project – Students complete a data analysis project with several scientific questions after the first midterm exam 6. Students select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH 711 but can improve model fitting. The report is written in a form that a non-statistician collaborator can understand. In the report, the student clearly writes the method they used and the interpretation of their results. Students will have an oral presentation of their project at the end of the semester. The peer review for classmates' projects is part of each student's report. Homework sets: see ERF D4.3 for sample problems Mid-term #1: see ERF D4.3 for sample questions and accompanying figures

Table D4-1.1 Assessment of Competencies for MPH in Biostatistics Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity1**
3. Identify and apply a variety of appropriate statistical methods for developing inferences about public-health-related questions.	PH 711 Intermediate Biostatistics	*Content*: Weeks 7, 16, Course project, Syllabus pp.3, 5-6; *Assessment:* Students complete a data analysis project with several scientific questions after the first midterm exam 6. Students select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH 711 but can improve model fitting. The report is written in a form that a non-statistician collaborator can understand. In the report, the student clearly writes the method they used and the interpretation of their results. Students will have an oral presentation of their project at the end of the semester. The peer review for classmates' projects is part of each student's report.
	PH 712 Probability and Statistical Inference	*Content*: syllabus p. 2-3 *Assessment*: In homework sets students identify appropriate statistical tests or methods to address specific public health questions and perform hypothesis testing based on sound statistical reasoning and inference. Sample Problems – Homework #6: (1) Suppose you construct a 95% confidence interval with bounds (a,b) Using the same data, suppose you construct a 90% confidence interval with bounds (c,d). Is (c,d) wider or narrower than (a,b)? Why? (5) In a given city, it is assumed that the number of automobile accidents in a given year follows a Poisson distribution. In past years the average number of accidents per year was 15, and this year it was 10. Is it justified to claim that the accident rate has dropped?

Table D4-1.1 Assessment of Competencies for MPH in Biostatistics Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity1**
4. Demonstrate basic programming skills in multiple statistical software packages and data management and integration techniques for public health and big data projects.	PH 711 Intermediate Biostatistics	*Content*: Weeks 7, 16, Course project, Syllabus pp.3, 5-6 *Assessment:* Students complete a data analysis project with several scientific questions after the first midterm exam 6. Students select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH 711 but can improve model fitting. The report is written in a form that a non-statistician collaborator can understand. In the report, the student clearly writes the method they used and the interpretation of their results. Students will have an oral presentation of their project at the end of the semester. The peer review for classmates' projects is part of each student's report.
	PH 718 Data Management and Visualization in R	*Content:* Project introduced after the mid-term exam. Presentations in Week 14 *Assessment:* students use R with a selected data set to perform tasks in data management and statistical analysis to predict all-cause mortality related to specified variables. Project includes paper with figures, results and R code and presentation
5. Formulate and produce graphical displays of quantitative information (e.g., scatter plots, box plots and line graphs) that effectively communicate analytic findings.	PH 711 Intermediate Biostatistics	*Assessment:* Students complete a data analysis project with several scientific questions after the first midterm exam 6. Students select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the

Table D4-1.1 Assessment of Competencies for MPH in Biostatistics Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity1**
		students write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH 711 but can improve model fitting. The report is written in a form that a non-statistician collaborator can understand. In the report, the student clearly writes the method they used and the interpretation of their results. Students will have an oral presentation of their project at the end of the semester. The peer review for classmates' projects is part of each student's report.
	PH 718 Data Management and Visualization in R	*Content:* Project introduced after the mid-term exam; presentations in Week 14 *Assessment:* students use R with a selected data set to perform tasks in data management and statistical analysis to predict all-cause mortality related to specified variables. Project includes paper with figures, results, and R code, and presentation
6. Demonstrate effective written and oral communication skills when reporting statistical results to different audiences of public health professionals, policy makers and community partners	PH 711 Intermediate Biostatistics	Assessment: Students complete a data analysis project with several scientific questions after the first midterm exam 6. Students select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH 711 but can improve model fitting. The report is written in a form that a non-statistician collaborator can

Table D4-1.1 Assessment of Competencies for MPH in Biostatistics Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity1**
		understand. In the report, the student clearly writes the method they used and the interpretation of their results. Students will have an oral presentation of their project at the end of the semester. The peer review for classmates' projects is part of each student's report.

Table D4-1.2 Assessment of Competencies for MPH in Community and Behavioral Health Promotion Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1.Demonstrate a broad knowledge and understanding of community and behavioral health theories and their application to health promotion and prevention.	PH 725 Theories and Models of Health Behavior	There are 4 graded mini-quizzes covering theories and models at different socio-ecological levels
2. Apply relevant theories, concepts, and models from the social and behavioral sciences to public health research and practice.	PH 725 Theories and Models of Health Behavior	Theory Application group paper and presentation; students graded individually on annotated bibliography and draft survey
3. Design public health programs, including their implementation and evaluation components	PH 727 Program Planning and Implementation in Public Health	Program development, implementation and evaluation project proposal assignment
	PH 728 Program Evaluation in Public Health	Development of an evaluation plan for a specific program; Worksheets 1-6; See ERF D4.3 CBHP for the Worksheets WS 1 (Week 3): Identifying Stakeholders WS 2 (Week 5): Describe Program WS 3 (Week 7): Focus the Evaluation WS 4 (Week 10): Gather Credible Evidence WS 5 (Week 12): Justify Conclusions WS 6 (Week 14): Communicating Results
4. Design a plan to assess community-level public health needs and assets.	PH 726 Community Health Assessment	Proposed plan for a community health assessment
5. Assess social and behavioral factors influencing	PH 726 Community Health Assessment	Proposed plan for a community health assessment and in-class presentation;

Table D4-1.2 Assessment of Competencies for MPH in Community and Behavioral Health Promotion Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
the health of individuals and communities.	PH 727 Program Planning and Implementation in Public Health	Program development and implementation project proposal assignment
6. Apply qualitative and quantitative methods to the assessment of public health problems, the articulation of community strengths, and the evaluation of prevention and intervention programs.	PH 726 Community Health Assessment	Proposed plan for a community health assessment and in-class presentation.
	PH 728 Program Evaluation in Public Health	A proposal of an evaluation of a selected health promotion program.
7. Identify and apply evidence-based approaches to the development and implementation of social and behavioral science interventions.	PH 727 Program Planning and Implementation in Public Health	Program development and implementation project proposal assignment
8. Demonstrate the capacity to effectively explain and discuss planning, implementation, and evaluation of public health programs.	PH 727 Program Planning and Implementation in Public Health	Program development and implementation project proposal assignment; presentations
	PH 728 Program Evaluation in Public Health	Oral presentation & discussion of proposed plan for program evaluation

Table D4-1.3 Assessment of Competencies for MPH in Environmental Health Sciences Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity**
1. Describe genetic, physiological and overall human health effects of primary environmental hazards resulting from both chronic and acute exposures.	PH 762 Environmental Epidemiology	Includes an in-depth paper on health impacts of environmental agent of student's choice.

Table D4-1.3 Assessment of Competencies for MPH in Environmental Health Sciences Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity**
2. Describe approaches for assessing, preventing and controlling environmental hazards that pose risks to both human and ecological health.	PH 743 Environmental Risk Assessment	4 Take-home assignments; Syllabus, pp. 3-5. Take-home assignment 1 covers PBPK modeling, Take-home assignment 2 covers uncertainty variability, Take-home assignment 3 covers exposure measurement, and Take-home assignment 4 covers risk communication.
3. Perform a risk assessment of an environmental health agent.	PH 743 Environmental Risk Assessment	This is the main project of PH743, where students perform a risk assessment on a group of chemicals or an individual chemical; students do 30-minute presentation, followed by question/answer session; students also write a 20–25-page paper on their risk assessment.
4. Identify, locate and use appropriate reference materials.	PH 762 Environmental Epidemiology	Semester-long paper requires searching, synthesizing, and citing relevant published literature on environmental epidemiologic topic of student's choice.
5. Comprehend the primary scientific research literature and obtain information directly from experts in the field of environmental health sciences.	PH 743 Environmental Risk Assessment (LITERATURE)	Student presentations require searches typically of primary literature in PubMed and selection of peer-reviewed scientific paper on specific topic.
	PH 750 Seminar in Environmental Health Sciences (LITERATURE)	Students lead weekly discussion of articles from primary literature related to environmental health sciences (course instructor identifies papers for the weekly discussions).
	PH 762 Environmental Epidemiology (EXPERT)	Course paper requires students to identify and conduct a phone interview with an expert on their selected topic.

Table D4-1.4 Assessment of Competencies for MPH in Epidemiology Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1. Identify critical social science, social epidemiology, and health equity theories that shape the framing, methods and interpretation of epidemiologic research and practice.	PH 758 Social Epidemiology	In the 6–8-page midterm paper, students submit short-answer responses based on selected social epidemiologic article(s). This assignment allows students to demonstrate their ability to identify the epidemiologic theories that shaped the authors' hypotheses, research questions and analytic methods.

Table D4-1.4 Assessment of Competencies for MPH in Epidemiology Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
2. Identify and describe socio-structural, environmental, behavioral and biological determinants of health and heath equity.	PH 700 Structures of Inequality and Population Health	In **part 4** of the class project (the final paper), students write a theory-grounded and evidence-informed structural analysis that explains how a specific health inequity has arisen and persists. They identify and describe macro structural determinants (e.g., systems of oppression, institutions, processes, and policies – historically and present-day) that produce differential exposure/vulnerability to and/or differential consequences of intermediary determinants (e.g., biological, behavioral, and environmental determinants as well as psychosocial factors, the health care system, and living conditions) that ultimately produce their selected health inequity.
3. Systematically gather, critically evaluate and synthesize epidemiological literature and other relevant information to advance population health and health equity.	PH 700 Structures of Inequality and Population Health	In **part 2** of the class project, students work in small teams to conduct a **systematic search** of the Medline database using keywords, MeSH terms, Boolean operators, truncation, and proximity searches based on a clear research Q. As a group, they write a methods summary describing the search strategy. Each student then critically evaluates and synthesizes the **public health and epidemiologic literature** to write a narrative review of intermediary determinants studied in the literature to explain their health inequity of interest. In **part 3** of the class project, students work in small teams and learn to conduct a **systematic search** of social science databases based on a clear research Q. As a small group, they write a methods summary describing the search strategy. Each student then critically evaluates and synthesizes the **social science literature** to write a narrative review of macro structural determinants studied in the literature to explain their health inequity of interest. In **part 4** of the class project, each student **synthesizes** their findings from parts 2 and 3 to write a **theory-grounded and evidence-informed structural analysis** that explains how a specific health inequity has arisen and persists. They identify and describe macro structural determinants

Table D4-1.4 Assessment of Competencies for MPH in Epidemiology Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		(e.g., systems of oppression, institutions, processes and policies – historically and present-day) that produce differential exposure/vulnerability to and/or differential consequences of intermediary determinants (e.g., biological, behavioral, and environmental determinants as well as psychosocial factors, the health care system, and living conditions) that ultimately produce their selected health inequality. .
4. Apply appropriate field and surveillance methods to investigate disease outbreaks and assess patterns of exposures and health outcomes in the population.	PH 761 Epidemiology Field Methods	All students individually complete an **Outbreak Homework** in which they list the steps in an outbreak investigation; interpret surveillance data; choose an appropriate public health response based upon interpretation of data; define the Incident Command System; and decide on information to include in a line listing. All students complete an **Individual Data Analysis Project**. The project requires students to use SAS to examine the association between income level (exposure) and perceived stress (outcome) in the Jackson Heart Study.
5. Develop self-reflective and other practical skills for ethical engagement with study participants, communities, and colleagues, in the performance of research and practice activities.	PH 763 Epidemiology in Action for Equity	In the **Community Listening and Self-Reflection assignment**, students identify a relevant community event where they can learn more about their community of focus through observation and listening. Through participant observation of the event, students identify needs, concerns, strengths, resources, and perspectives of people in select communities that experience social marginalization, and they practice principles of cultural humility/safety, self-reflexivity, and standpoint epistemology. Through **weekly graded journal entries**, students practice self-reflexivity. A crucial concept in community-engaged research is self-reflection on the part of the researcher. For each self-reflection journal entry, students explore an experience within or related to the course in 300-350 words. The journal entries can be in relation to any aspect of the course such as course readings, in-class discussions, the student's community of focus, their experience doing

Table D4-1.4 Assessment of Competencies for MPH in Epidemiology Track		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		peer facilitation, and/or group work. Each week, they select one (1) Self Reflection Journal Question (created in class during Week 2) to guide the journal entry. Each journal entry is worth 10 points and graded using a rubric.
	PH 761 Epidemiology Field Methods	To learn more about ethical engagement with study participants, each student completes **UWM Human Subjects Research Training through** the Collaborative Institutional Training Initiative (CITI), selecting the Biomedical & Socio-Behavioral option. This online course is a series of modules and quizzes expected to take 3-4 hours to complete. A score of at least 80% is required before a completion report will be issued.
6. Select epidemiologic methods and conduct statistical analyses to describe patterns of health and determinants of health, assess associations between exposures and health outcomes while minimizing threats to causal inference.	PH 759 Introduction to Regression for Understanding the Social Determinants of Health	Problem Sets #4, #5, and #6, and the final exam involve coding large datasets and conducting statistical analyses (i.e., building multivariable regression models and performing diagnostics) and reporting and interpreting results. In pursuit of causal inference and with a specific focus on the context of social determinants of health, students describe patterns of health and determinants of health, and assess associations between exposures and health outcomes, while minimizing threats to validity.
7. Critically evaluate epidemiologic literature with attention to strengths and limitations of the study design, methods, analytic approach, and policy and practice implications.	PH 758 Social Epidemiology	Students complete weekly graded discussion questions based on empirical epidemiologic articles. Students explain strengths and limitations of study design and analytic approach and describe the policy and practice implications of study findings.

Table D4-1.5 Assessment of Competencies for MPH in Public Health Policy and Administration Track*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1. Integrate ethical principles into public health policy practice and research by ensuring respect for diverse values, beliefs, and cultures and the dignity of individuals and communities.	PH 776 Qualitative Approaches in Public Health Policy and Administration (ETHICS IN RESEARCH)	Positionality and Reflexivity Weekly Activity (week 5) in which students reflect on their own identity and how it shapes their worldviews and interactions with others **and** Informed Consent and Interview Guide Assignment in which they need to create an informed consent document for an interview.
	PH 779 Public Health Policymaking and Policy Analysis (ETHICS IN POLICY PRACTICE)	Policy Analysis paper in which students must consider equity as a criterion in their policy analysis and apply foundational ethical values in comparing all policies fairly across all measures and anticipating potential unintended consequences.
2. Conduct policy analysis in public health policy, identifying and assessing policy options, outcomes, and potential contributions to population health and health disparities.	PH 785 Principles of Public Health Economics (POLICY ANALYSIS METHODS)	In quizzes and homework assignments, students apply core principles of economic theory to identify policy options to address problems that can contribute to population health and identify potential outcomes. See ERF D4.3 for sample assignments.
	PH 779 Public Health Policymaking and Policy Analysis (POLICY OPTIONS & OUTCOMES)	Policy Analysis paper in which students make use of existing research to compare policy options across several criteria (including efficiency and equity) and make a recommendation to a stakeholder.
4. Analyze quantitative data to assess the relationship between policy, policy malleable factors, and public health relevant outcomes.	PH 777 Quantitative Research Methods for Public Health Policy	In homework assignments students analyze quantitative data to assess the relationship between policy malleable factors and health outcomes. See ERF D4.3 for sample assignments.
5. Collect and analyze qualitative data to inform public health policy recommendations.	PH 776 Qualitative Approaches in Public Health Policy	In the Interview, Second Data Collection, and Coding assignments students collect and analyze qualitative data of policy relevance. In the Final Proposal assignment, students must also articulate the policy implications of a proposed larger research study. Additionally, in the week 15 graded activity, students must develop policy recommendations based on the data they collected this semester.

*The Faculty Council approved a track name change to Public Health Policy on 12/22/21. This change will be effective in the UWM 2022-23 Catalog for AY 2022-23.

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.**

   See ERF D4.3 for the syllabi listed in the five D4-1 tables for each MPH track.

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

   Strengths
   - All MPH track-level competencies are delivered
   - No systematic areas of competency deficiency
   - Extensive program- and track-level work on competency development and mapping

   Challenges
   - Continued curriculum refinements to ensure competency delivery at the Developing and/or Advanced level
   - Data monitoring and feedback systems took time to refine for efficient implementation and data usage

   Plan
   - Continue to refine competency self-assessment process for ease of data use
   - Improve system for reporting aggregate competency self-assessment to tracks and GPC for quality improvement
   - Implement system for tracking internal and external “S” electives; this process will help illustrate more clearly why courses are on a “S” electives list and ensure course offerings are current
   - Develop tracking and feedback system for student-selected competencies in the Field Experience and Capstone; we have this at the individual level but not the program level; this will allow us to see what competencies students are selecting across and within tracks

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.**

   Students are introduced to the Field Experience competencies at orientation and in two required workshops. Every student completes a Learning Agreement, which is presented in detail at a workshop in the semester before the Field Experience. The Learning Agreement identifies the five competencies along with accompanying activities that describe how students will do the project work and what two products will demonstrate competency attainment. The school requires two Foundational Competencies -- #16/Leadership and #19/Communication of audience-appropriate content. Students choose the third Foundational Competency along with two track competencies based on their interests and the proposed Field Experience project. The Community Engagement Coordinator facilitates meetings between the student and preceptor to finalize the scope of the work, highlight any particular competencies that student has identified, confirm the two products that address both preceptor and student needs, and review the timeline as well as any special resources or conditions. Faculty advisors provide input during the site selection process, and sometimes they participate in the meeting with the preceptor. They review the Learning Agreement, as do the Community Engagement Coordinator and preceptor. Once students complete the final edits, they obtain signatures from the faculty advisor, preceptor, and finally, the course instructor, and enroll in the Field Experience course. With input from the preceptor's evaluation, the course instructor assesses the student's products to confirm attainment of the specified competencies.

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

   The school conveys the official requirements for the Applied Practice Experience through various materials for the PH 790 Field Experience course. The 2021-2022 Graduate Student Handbook, available at the school website under Academics, includes a section on the Field Experience (Under Curriculum & Courses, pp. 33-34). In addition, students have access to the Field Experience Handbook, which was updated in summer 2021. At orientation, students receive the Timeline and Checklist/Expectations sheet. At the first required workshop in September, students review the Learning Agreement and Activity Log.

   Students also have opportunities to interact with faculty and Community Engagement staff about the site selection process and course requirements at orientation and in two required workshops. In addition, students and faculty advisors meet at least twice during the first year to talk about the Field Experience, and students share ideas with staff for sites and identify potential projects from a list compiled by the Community Engagement Coordinator.

During the Field Experience semester, students have the course syllabus and Canvas course site to guide them on course requirements. The syllabus includes the competencies, lists class meeting dates for the companion one-credit leadership course, and describes final course assignments. The Canvas course site, meanwhile, has the readings for the Leadership course as well as detailed instructions for the Leadership assignments and course Final Report. Students submit the Activity Log monthly to the Community Engagement staff, faculty advisor, and course instructor. The course instructor provides comments on progress and addresses any concerns regarding completion of the 240 hours and the specified products. Community Engagement staff conduct check-in meetings with preceptors and schedule meetings with students as needed in support of their completion of the course. See ERF D5.2 for the Field Experience materials.

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

See ERF D5.3 for five samples of student work from 2018-19, 2019-2020, and 2020-21 across the five tracks.

The first coordinated MPH-MSW field work course will be offered in Fall 2021. This student's work products are in ERF D5.3.

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

Strengths

- Field Experience course facilitates students' attainment of three foundational and two track competencies through two required products in a practice setting
- Strong relationships for placement sites with diverse range of agencies
- Preceptors' commitment to Field Experience course
- Preceptors' satisfaction with the course overall; few indicate that they would not host students again

Challenges

- Consistency in preceptor orientation and expectations
- Consistency in using preceptors' evaluations to assess student performance and make improvements in the course
- Field Experience Handbook out of date
- Finding placements and working remotely during COVID-19 pandemic; half as many project proposals received compared to 2020
- No preceptor event during summer 2020 due to COVID-19 pandemic

Plan

- Continue to strengthen partnerships through project proposal process with existing placement sites and new placements sites to ensure range of options across all MPH Tracks
- Continue to host Preceptor event in June (6/30/21)
- Strengthen preceptor orientation
- Update Field Experience Handbook
- Continue mid-semester check-in meetings with preceptors
- Strengthen evaluation of Field Experience including preceptor and student feedback

D6. DrPH Applied Practice Experience (if applicable)

NOT 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 (eg, 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.**

   The MPH integrative learning experience is a capstone course that all MPH students take as a two-credit seminar. This course is graded Satisfactory/Unsatisfactory. The Capstone requires students to integrate the knowledge and skills learned in the classroom and Field Experience into some aspect of professional public health practice. The Capstone Proposal (see ERF D7.3) specifies the required competencies for all students along with track-specific information for other required MPH/Foundational, Track, and cross-Track Competencies. Table D7-1 below describes the Integrative Learning Experience for all MPH students.

Table D7-1 MPH Integrative Learning Experience for all Tracks

Integrative learning experience	How competencies are synthesized
PH 800 Capstone in Public Health (2 credits)	Students apply concepts and principles to a specific problem or issue and identify activities for a set of required and selected Foundational, Track, and cross-Track competencies in a required Capstone Proposal. The faculty advisors and course instructor(s) review and approve the proposals. All students do a paper and poster. To assess synthesis of competencies, course instructors use rubrics (see ERF D7.4) to evaluate how well students present the context and significance of their project, articulate aims/research questions, interpret findings/results, and discuss implications related to evidence and best practices. The instructors also consider the extent to which the student incorporates any new methods or approach and discusses recommendations that present new ideas based on evidence and critical thinking in the project's context. Faculty advisors provide feedback on the paper third draft and poster draft. To demonstrate synthesis of competencies, students write a two-page reflection paper, which provides the instructors with the student's self-assessment.

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

Process

Students attend a required workshop the semester before they take the Capstone course. The Course Instructor describes the course, reviews expectations of the different roles, and presents the Proposal timeline. The Course Instructor also reviews the Capstone Proposal, including the required and selected competencies. Students prepare the Proposal during that semester and are encouraged to work with an organizational partner who contributes to this process. However, the students are the drivers of their projects. Students must submit a completed, signed proposal in order to enroll in the PH 800 course.

During the Capstone semester students attend specified class sessions including workshops on writing and draft posters and a Mock Interview event. They work with their advisors as needed throughout the semester, and the advisor provides feedback on the third draft of the paper and the draft poster. The Course Instructor provides feedback on all paper drafts and conducts a required conference with each student. Students can request additional conferences as needed. The course culminates in a poster presentation event to which students, faculty, staff, and project organizational partners (when applicable) are invited.

Expectations

In the semester prior to the Capstone, students are expected to discuss project ideas and Foundational/Track competencies with their faculty advisors. The school has selected four MPH Program Competencies that are mapped to four Foundational Competencies, which all students are required to address. The requirements focus on data analysis and interpretation (FC #3 and 4), leadership (FC #16), and communication (FC #19). This “map” will be added to the Capstone Proposal and is currently presented in the course syllabus (Objectives, p. 2 and paper evaluation, pp. 10-11; see ERF D7.3). Students must also select additional competencies based on their track. The student and faculty advisor confirm whether the project will involve an organizational partner as well. Faculty advisors are expected to review the Capstone Proposal, clarifying any issues with the student and organizational partner, if there is one. Students must submit a signed Proposal to enroll in the course. Students are expected to be ready to begin the Capstone project by the beginning of the PH 800 semester.

During the Proposal process, faculty advisors and students also discuss any data requirements for the project. Students are expected to request public data and/or prepare the Institutional Review Board (IRB) proposal for submission during this semester.

Students may decide on a group project that is either within or cross track. Each student submits a Proposal to their respective faculty advisor to delineate their specific competencies and contributions to the paper. Each student submits their own paper. Usually they prepare one poster, though each student must present during the event.

Finally, students are expected to attend the required classes during the PH 800 course semester, submit paper and poster drafts on time, participate in at least one conference about the paper, and present at the poster event at the end of the semester.

Assessment

Faculty advisors and the Capstone Instructor assess the students’ papers and posters. The course instructor provides feedback to the student on each draft, and students may request a conference at any time. Depending on the project, the student may have regular interaction with the faculty for data collection, cleaning, and analyzing questions. The faculty advisor also comments on the third paper draft as well as the draft poster. Another point of feedback is during the draft poster workshop, where students receive comments from their peers.

Students doing group projects are assessed individually on their designated parts of the paper and poster.

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

Students receive a Checklist/Expectations sheet and the Capstone Proposal template at the required workshop in the semester before the Capstone. The Capstone Proposal template includes appendices for each track with specific competencies listed as well as paper options for that track. The AY 2021-22 Student Handbook includes a description of the course (p. 34) as well as all the competencies (Foundational, MPH Program, and Track; pp. 25-31). Students receive the PH 800 course syllabus at the beginning of the semester.

The course Canvas site includes the syllabus, paper outlines, writing resources, any assigned readings, and materials for the Mock Interview event.

See ERF D7.3 for the course documentation.

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.**

During the semester faculty advisors and the Course Instructor assess students' attainment of the specified competencies through feedback on scaffolded drafts of the paper. They also provide feedback on the draft poster. For assessment of the final paper, they use a rubric that addresses nine areas, including for example:

1. Demonstrated knowledge of relevant research findings (literature review);
2. Delivery of a strong, compelling case for why the issue needs to be addressed, including how this project addresses real world issues, concerns and problems in meaningful ways (significance of the problem, project need, and justification);
3. Demonstrated skills in organizing and presenting a high-quality public health product (organization, clarity, flow); and
4. Demonstrated clear written communication including the quality of sentences, paragraphs, articulation of complex ideas, grammar/spelling (Spelling, grammar, and punctuation)

The faculty advisors and Course Instructor also complete a rubric for the poster.

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.**

See ERF D7.5 for samples of Capstone papers and posters from 2018-19, 2019-20, and 2020-21 for all five tracks.

No MPH-MSW students will have completed the Capstone by the time of the site visit in February 2022.

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

Strengths

- Involvement of community partners in many projects each semester
- Integration of MPH Program, Foundational, Track, and cross-Track competencies into projects
- Requirement of Capstone Proposal submission in semester before Capstone helping students stay on track to finish project

Challenges

- Requirement of Capstone Proposal submission in semester before Capstone difficult for faculty and students at end of semester
- Need for clarification of role of faculty and Capstone instructor(s); faculty resources/workload for advising students during the semester (initial discussion on 3/19/21)

Plan

- Continue work of small faculty team tasked with assessing the Capstone challenges and recommending solutions during Summer 2021; update recommendations based on discussion at faculty retreat on 8/27/2021

D8. DrPH Integrative Learning Experience

NOT APPLICABLE

D9. Public Health Bachelor's Degree General Curriculum

The overall undergraduate curriculum (eg, general education, liberal learning, essential knowledge and competencies, etc.) introduces students to the domains. The curriculum addresses these domains through any combination of learning experiences throughout the undergraduate curriculum, including general education courses defined by the institution as well as concentration and major requirements or electives.

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

   Coursework for the Bachelor of Science degree in Public Health (BSPH) consists of 120 credits, including 33 credits of Foundations coursework that also satisfies UWM's General Education Requirements (GER) (though some students are required to take additional GER courses depending on their high school education and math and English placement exam scores), 54 credits of Public Health Major requirements, and up to 33 credits of electives (some students use these electives to complete a minor and/or certificate in another complementary field).

   All required coursework for the BSPH is listed in UWM's online Academic Catalog under requirements: https://catalog.uwm.edu/public-health/public-health-bs/#requirementstext

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

   The BSPH is 120 credits. All required coursework for the BSPH is listed in UWM's online Academic Catalog under requirements: https://catalog.uwm.edu/public-health/public-health-bs/#requirementstext

   UWM's General Education Requirements are specified in the online Academic Catalog under undergraduate policies: https://catalog.uwm.edu/policies/undergraduate-policies/#generaleducationtext . The BSPH meets or exceeds these requirements.

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

   See Table D9-1 for courses that ensure all BSPH students are introduced to the science, social and behavioral science, math/quantitative reasoning, and humanities/fine arts domains.

Table D9-1 BSPH General Curriculum - Courses that Cover the Domains

Domains	Courses through which BSPH students are introduced to the domains specified
Science: Introduction to the foundations of scientific knowledge, including the biological and life sciences and the concepts of health and disease	*Required courses (each 3 credits)* **BIO SCI 102: Elements of Biology** (Foundations course) - covers organization and function of living systems. 2 hours lecture, 2 hours lab. **PH 142: Exploring Global Environmental Health** (PH Major course) - introduces the sciences underpinning the study and response to infectious, chemical, and physical environmental threats to human health within a global public health framework.

Table D9-1 BSPH General Curriculum - Courses that Cover the Domains	
Domains	**Courses through which BSPH students are introduced to the domains specified**
	PH 303: Climate Change, the Environment and Human Health (PH Major course) – covers evidence of climate change, impacts on health and disease, and types of adaptation and mitigations strategies at level of community and nation. 3 hours lecture **PH 346: Environmental Health and Disease** (PH Major course) - investigates how the environment impacts human health and population health emphasizing the developmental origins of disease. 2 hours lecture, 2.5 hours lab **PH 302: Health and Disease: Concepts and Contexts** (PH Major course) - covers concepts of health and disease across social, historical, political, and cultural contexts.
Social and Behavioral Sciences: Introduction to the foundations of social and behavioral sciences	All BSPH students take ***one 3 credit political science Foundations course*** that satisfies UWM's GER in the Social Sciences. Examples include: POL SCI 104: Introduction to American Government and Politics POL SCI 210: American Public Policy All BSPH students take ***one 3 credit behavioral science Foundations course*** that satisfies UWM's GER in the Social Sciences. Examples include: PH 306: Adolescent Health & Development PSYCH 101: Introduction to Psychology SOCIOL 104: Introduction to Social Psychology All BSPH students take ***one 3 credit social inequality Foundations course*** that satisfies UWM's GER in the Social Sciences (SS); many also satisfy UWM's GER in Cultural Diversity (CD). Examples include: AIS 101: Introduction to American Indian Studies (SS, CD) GEOG 114: Geography of Race in the United States (SS, CD) LATINO 101: Introduction to Latino Studies (SS, CD) SOCIOL 233: Social Inequality in the United States (SS) WGS 200: Introduction to Women's and Gender Studies: A Social Science Perspective (SS) Our required ***3 credit Public Health Major course*, PH 101: Introduction to Public Health** also satisfies UWM's GER in the Social Sciences.
Math/Quantitative Reasoning: Introduction to basic statistics	All BSPH students take ***one 3 credit introductory statistics course as part of their Public Health major requirements*** that also satisfies UWM's Quantitative Literacy (QL) Competency part B. Most students take one of: KIN 270: Statistics in the Health Professions: Theory and Practice SOCIOL 261: Introduction to Statistical Thinking in Sociology

Table D9-1 BSPH General Curriculum - Courses that Cover the Domains	
Domains	**Courses through which BSPH students are introduced to the domains specified**
Humanities/Fine Arts: Introduction to the humanities/fine arts	All BSPH students take ***one 3 credit Arts and Cultural Diversity Foundations course*** that satisfies UWM's GER in the Arts and in Cultural Diversity. Examples include: ART 309: Issues in Contemporary Art: Select Topics FILM 150: Multicultural America THEATRE 150: Multicultural America All BSPH students take ***one 3 credit Humanities Foundations course*** that satisfies UWM's GER in the Humanities (HU); some also satisfy UWM's GER in Cultural Diversity (CD). Examples include: ETHNIC 101: The Multi-Racial Origins of American Cultures (HU, CD) ETHNIC 275: Queer Migrations (HU, CD) HIST 229: History of Race, Science, and Medicine in the United States (HU, CD) All BSPH students take ***one 3 credit Communication/Public Speaking Foundations course***, **COMMUN 103: Public Speaking**, that also satisfies UWM's GER in the Humanities. All BSPH students take ***3 credits of Ethics Foundations***, most of which satisfy UWM's GER in the Humanities (HU). Examples include: PHILOS 241: Introductory Ethics (HU) PHILOS 244: Ethical Issues in Health Care: Select Topics (HU - topics include Biomedical Ethics; Contemporary Problems)

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

Strengths: Our BSPH curriculum requires 33 credits of Foundations courses that provide a strong introduction to the humanities and fine arts, statistical/quantitative reasoning, and the foundations of scientific knowledge, including biological and life sciences, and social sciences. Many of our Public Health major courses complement these strengths. The Foundations coursework also covers fundamentals of cultural diversity, ethics, and history, and requires two courses in academic and professional writing so that students are well-prepared for upper-level Public Health major required coursework.

D10. Public Health Bachelor's Degree Foundational Domains

The requirements for the public health major or concentration provide instruction in the domains. The curriculum addresses these domains through any combination of learning experiences throughout the requirements for the major or concentration coursework (ie, the school may identify multiple learning experiences that address a domain—the domains listed below do not each require a single designated course).

If the school intends to prepare students for a specific credential, the curriculum must also address the areas of instruction required for credential eligibility (eg, CHES).

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

   To determine whether a course covers a domain at the Introduced (I) or Covered (C) level, we used the Association of Schools and Programs of Public Health (ASPPH) revised Bloom's Learning Taxonomy levels (2013). A domain is considered Introduced If students in the course address the domain through any assessment or activity (graded or ungraded) at Level 1 or 2 on the Bloom's document; this level includes recalling information, explaining ideas or concepts, and/or reacting and actively participating. A domain is considered Covered if students in the course address the domain at Level 3 or higher; this includes using information, breaking ideas or concepts into parts and understanding relationships, justifying decisions, generating new ideas, and/or attaching value to or organizing information/ideas. We used Bloom's cognitive and/or affective domains to make each determination.

   Please see Tables D10-1a through D10-1g below; these tables present the information in Template D10-1 by domains. See ERF D10.1 for Template D10-1 and Tables D10-1a through D10-1g.

   Documentation is provided in syllabi (see course schedule, table of Assignments and Associated BSPH Core Competencies/ Domains, and/or assignment descriptions) or sample assignments if provided as separate documents in the ERF.

Table D10-1a: Public Health Domains – Overview of Public Health												
Public Health Domains	**Course Name and Number**											
	PH 101 Intro to Public Health	*PH 142 Exploring Global Environ Health*	*PH 202 Public Health from Cells to Society II*	*PH 302 Health Concepts & Contexts*	*PH 303 Climate Change, the Environ and Human Health*	*PH 319 Intro to Health Disparities*	*PH 327 Foundations for Action in Public Health*	*PH 355 Public Health Research Methods I*	*PH 408 Comparative Health Systems: A Social Determinants Approach*	*PH 410 True Lies: Consuming and Communicating Quantitative Information*	*PH 427 Strategies for Action in Public Health*	*HCA 307 Epidemiol for the Health Sciences*
Overview of Public Health: Address the history and philosophy of public health as well as its core values, concepts, and functions across the globe and in society												
Public Health History	*I*	*I*		*C*		*I*	*I*		*C*			*I*
Public Health Philosophy	*I*		*C*			*I*	*C*					*I*
Core PH Values	*I*	*I*	*C*		*I*	*I*	*C*	*C*	*I*		*I*	*I*
Core PH Concepts	*C*	*I*	*I*	*I*		*C*	*I*	*I*	*C*	*C*	*C*	*C*
Global Functions of Public Health	*I*	*I*	*I*		*C*	*I*			*I*			*I*
Societal Functions of Public Health	*C*	*I*	*I*	*C*	*I*	*I*	*I*		*I*	*I*	*I*	*I*

Table D10-1b: Public Health Domains – Role and Importance of Data in Public Health													
Public Health Domains	**Course Name and Number**												
	PH 101: Intro to Public Health	*PH 142: Exploring Global Environ Health*	*PH 201: Public Health from Cells to Society I*	*PH 202: Public Health from Cells to Society II*	*PH 303: Climate Change, the Environ and Human Health*	*PH 346: Environ Health and Disease*	*PH 355: Public Health Research Methods I*	*PH 410: True Lies: Consuming and Communicat Quantitative Information*	*PH 427: Strategies for Action in Public Health*	*PH 428: Program Implement & Eval for a Healthy Society*	*PH 455: Public Health Research Methods II*	*KIN 270: Statistics in the Health Professions: Theory and Practice*	*HCA 307: Epidemiol for the Health Sciences*
Role and Importance of Data in Public Health: Address the basic concepts, methods, and tools of public health data collection, use, and analysis and why evidence-based approaches are an essential part of public health practice													
Basic Concepts of Data Collection	*I*	*I*		*I*	*I*	*C*	*C*	*I*		*I*	*C*		*C*
Basic Methods of Data Collection	*I*	*C*			*C*	*C*	*C*	*I*		*I*	*C*		*C*
Basic Tools of Data Collection	*I*	*C*	*I*		*C*	*C*	*C*	*I*	*I*	*C*	*C*		*I*
Data Usage	*I*	*C*	*I*	*C*	*C*	*C*	*I*	*C*	*I*	*C*	*C*	*C*	*I*
Data Analysis				*C*	*C*	*C*	*I*	*C*		*I*	*C*	*C*	*I*
Evidence-based Approaches	*C*	*I*	*I*	*C*	*C*	*I*	*C*	*C*	*C*	*C*	*C*		*I*

Table D10-1c: Public Health Domains – Identifying and Addressing Population Health Challenges, and Human Health													
Public Health Domains	**Course Name and Number**												
	PH 101 Intro to Public Health	*PH 142 Exploring Global Environ Health*	*PH 201 Public Health from Cells to Society I*	*PH 202 Public Health from Cells to Society II*	*PH 302 Health Concepts & Contexts*	*PH 303 Climate Change, the Environ and Human Health*	*PH 319 Intro to Health Disparities*	*PH 327 Foundations for Action in Public Health*	*PH 346 Environ Health and Disease*	*PH 408 Comparative Health Systems: A Social Determinants Approach*	*PH 410 True Lies: Consuming and Communicat Quantitative Information*	*PH 427 Strateg for Action in Public Health*	*PH 428 Program Implement & Eval for a Healthy Society*
Identifying and Addressing Population Health Challenges: Address the concepts of population health, and the basic processes, approaches, and interventions that identify and address the major health-related needs and concerns of populations													
Population Health Concepts	*I*	*I*	*I*	*C*	*I*	*I*	*I*	*I*		*I*	*C*	*C*	
Introduction to Processes and Approaches to Identify Needs and Concerns of Populations	*I*	*I*				*C*						*C*	*I*
Introduction to Approaches and Interventions to Address Needs and Concerns of Populations	*C*	*I*	*I*	*C*		*C*	*I*	*C*		*C*		*C*	*I*

Table D10-1c: Public Health Domains – Identifying and Addressing Population Health Challenges, and Human Health													
Public Health Domains	**Course Name and Number**												
	PH 101 Intro to Public Health	*PH 142 Exploring Global Environ Health*	*PH 201 Public Health from Cells to Society I*	*PH 202 Public Health from Cells to Society II*	*PH 302 Health Concepts & Contexts*	*PH 303 Climate Change, the Environ and Human Health*	*PH 319 Intro to Health Disparities*	*PH 327 Foundations for Action in Public Health*	*PH 346 Environ Health and Disease*	*PH 408 Comparative Health Systems: A Social Determinants Approach*	*PH 410 True Lies: Consuming and Communicat Quantitative Information*	*PH 427 Strateg for Action in Public Health*	*PH 428 Program Implement & Eval for a Healthy Society*
Human Health: Address the underlying science of human health and disease including opportunities for promoting and protecting health across the life course													
Science of Human Health and Disease		*I*	*I*		*I*	*I*			*C*				
Health Promotion	*C*	*I*	*I*	*I*	*I*	*C*	*I*	*I*	*I*	*C*	*I*	*C*	*I*
Health Protection	*I*	*I*	*I*	*C*		*C*				*I*			

Table D10-1d: Public Health Domains – Determinants of Health												
Public Health Domains	**Course Name and Number**											
	PH 101 Intro to Public Health	*PH 142 Exploring Global Environ Health*	*PH 201 Public Health from Cells to Society I*	*PH 202 Public Health from Cells to Society II*	*PH 302 Health Concepts & Contexts*	*PH 303 Climate Change, the Environ and Human Health*	*PH 319 Intro to Health Disparities*	*PH 327 Foundations for Action in Public Health*	*PH 346 Environ Health and Disease*	*PH 408 Comparative Health Systems: A Social Determinants Approach*	*PH 427 Strategies for Action in Public Health*	*HCA 307 Epidemiol for the Health Sciences*
Determinants of Health: Address the socio-economic, behavioral, biological, environmental, and other factors that impact human health and contribute to health disparities												
Socio-economic Impacts on Human Health and Health Disparities	*I*	*I*	*I*	*C*	*C*	*C*	*C*	*I*		*C*	*I*	
Behavioral Factors Impacts on Human Health and Health Disparities	*I*	*I*		*I*	*C*	*I*	*I*	*I*			*C*	*I*
Biological Factors Impacts on Human Health and Health Disparities	*I*	*I*	*I*		*I*	*C*		*I*	*C*			*I*
Environmental Factors Impacts on Human Health and Health Disparities	*I*	*I*	*I*		*I*	*C*	*I*	*I*	*C*			*I*

Table D10-1e: Public Health Domains – Project Implementation and Overview of the Health System										
Public Health Domains		**Course Name and Number**								
		PH 101 Intro to Public Health	*PH 201 Public Health from Cells to Society I*	*PH 202 Public Health from Cells to Society II*	*PH 319 Intro to Health Disparities*	*PH 327 Foundations for Action in Public Health*	*PH 408 Comparative Health Systems A Social Determinants Approach*	*PH 427 Strategies for Action in Public Health*	*PH 428 Program Implementation & Evaluation for a Healthy Society*	*PH 455 Public Health Research Methods II*
Project Implementation: Address the fundamental concepts and features of project implementation, including planning, assessment, and evaluation										
	Introduction to Planning Concepts and Features	*I*				*I*		*C*	*C*	*C*
	Introduction to Assessment Concepts and Features	*I*						*I*	*C*	*C*
	Introduction to Evaluation Concepts and Features	*C*						*I*	*C*	*C*
Overview of the Health System: Address the fundamental characteristics and organizational structures of the U.S. health system as well as to the differences in systems in other countries										
	Characteristics and Structures of the U.S. Health System	*I*	*I*	*I*	*I*		*C*			
	Comparative Health Systems						*C*			

Table D10-1f: Public Health Domains – Health Policy, Law, Ethics, and Economics											
Public Health Domains	**Course Name and Number**										
	PH 101 Intro to Public Health	*PH 142 Exploring Global Environ Health*	*PH 201 Public Health from Cells to Society I*	*PH 202 Public Health from Cells to Society II*	*PH 302 Health Concepts & Contexts*	*PH 303 Climate Change, the Environ and Human Health*	*PH 319 Intro to Health Disparities*	*PH 327 Foundations for Action in Public Health*	*PH 346 Environ Health and Disease*	*PH 408 Comparative Health Systems A Social Determinants Approach*	*HCA 307 Epidemiol for the Health Sciences*
Health Policy, Law, Ethics, and Economics: Address the basic concepts of legal, ethical, economic, and regulatory dimensions of health care and public health policy, and the roles, influences and responsibilities of the different agencies and branches of government											
Legal dimensions of health care and public health policy	*I*	*I*	*I*	*C*	*I*	*I*	*I*	*I*		*C*	*I*
Ethical dimensions of health care and public health policy	*I*	*I*		*I*	*C*	*I*	*I*	*C*	*I*	*C*	
Economical dimensions of health care and public health policy		*I*		*C*	*I*					*C*	
Regulatory dimensions of health care and public health policy	*I*	*I*	*I*	*C*		*C*	*I*	*I*	*C*	*C*	*I*
Governmental Agency Roles in health care and public health policy	*I*	*I*	*I*	*I*		*C*	*I*	*I*		*C*	

Table D10-1g: Public Health Domains – Health Communications													
Public Health Domains	**Course Name and Number**												
	PH 101 Intro to Public Health	*PH 302 Health Concepts & Contexts*	*PH 303 Climate Change, the Environ and Human Health*	*PH 319 Intro to Health Disparit*	*PH 327 Foundations for Action in Public Health*	*PH 346 Environ Health and Disease*	*PH 355 Public Health Research Methods I*	*PH 408 Comparative Health Systems A Social Determinant Approach*	*PH 410 True Lies Consuming and Communicat Quantitative Information*	*PH 427 Strateg for Action in Public Health*	*PH 428 Program Implement & Eval for a Healthy Society*	*PH 455 Public Health Research Methods II*	*KIN 270 Statistics in the Health Profess: Theory and Practice*
Health Communications: Address the basic concepts of public health-specific communication, including technical and professional writing and the use of mass media and electronic technology													
Technical writing	*I*		*C*			*C*			*C*	*I*	*C*	*C*	*C*
Professional writing	*C*	*C*	*C*		*C*		*C*	*C*		*C*	*C*		
Use of Mass Media		*C*	*I*		*I*				*C*	*I*			
Use of Electronic Technology	*I*	*C*	*C*	*C*				*C*			*C*	C	

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

See ERF D10.2 for the syllabi for each course listed in Template D10-1 (Tables D10-1a through D10-1e).

Comprehensive list from Tables D10-1a through D10-1e
PH 101 Intro to Public Health
PH 142 Exploring Global Environ Health
PH 201 Public Health from Cells to Society I
PH 202 Public Health from Cells to Society II
PH 302 Health Concepts & Contexts
PH 303 Climate Change, the Environment and Human Health
PH 319 Intro to Health Disparities
PH 327 Foundations for Action in Public Health
PH 346 Environ Health and Disease
PH 355 Public Health Research Methods I
PH 408 Comparative Health Systems: A Social Determinants Approach
PH 410 True Lies: Consuming and Communicating Quantitative Information
PH 427 Strategies for Action in Public Health
PH 428 Program Implement & Eval for a Healthy Society
PH 455 Public Health Research Methods II
KIN 270 Statistics in the Health Professions: Theory and Practice
HCA 307 Epidemiol for the Health Sciences

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

Strengths: Our BSPH curriculum requires 54 credits of Public Health major courses (18 3-credit courses total) that provide both breadth and depth of content across the public health foundational domains. Our Zilber School faculty, lecturers, and ad hoc faculty teach all but two of these courses, which means that the Zilber School Undergraduate Program Committee provides oversight of the curriculum.

We set a high bar for meeting the criteria of "Covered," requiring that students apply, analyze, evaluate, attach value, and/or generate new ideas based on their understanding of core concepts and information. Our curriculum emphasizes application, active learning, and engaging with real world problems. Students thus address domains at a high level across multiple courses and contexts.

Challenges: During our self-study process we found that the partial first domain of addressing global functions of public health was introduced across several courses, but no assignments or class activities applied or analyzed these global functions. In addition, our students identified that the epidemiology course offered through the College of Health Sciences (HCA 307) was not meeting their needs because the course is taught at a very introductory level, and we introduce epidemiology concepts in several of our courses.

Plan: To cover global functions of public health, in Fall 2021 PH 303 added in-class activities (with grading rubric) consisting of written and oral responses to discussion prompts that require analysis of global functions of public health as they pertain to the global climate crisis. Through these activities, students in PH 303 analyze assigned journalism articles, academic review articles, and brief videos to assess global public health mitigation and adaptation strategies that can be used to protect vulnerable populations and address global climate change. See ERF

D10.2 in the PH 303 folder for detailed participation notes (Table D10-1a; Sub-domain 1.5 Global Functions of PH).

Regarding HCA 307, we developed an introductory epidemiology methods course (PH 304 Foundations of Epidemiology) that is better tailored to our curriculum. PH 304 will replace HCA 307 (Tables D10-1a, D10-1b, D10-1d) as the required epidemiology course beginning in Fall 2022. See ERF D10.2 for the new PH 304 syllabus, which was approved by the campus Academic Program and Curriculum Committee (APCC) on 11/9/21.

D11. Public Health Bachelor's Degree Foundational Competencies

Students must demonstrate the following competencies:

- **the ability to communicate public health information, in both oral and written forms, through a variety of media and to diverse audiences**
- **the ability to locate, use, evaluate and synthesize public health information**

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

Table D11-1 Public Health Bachelor's Degree Foundational Competencies		
Competencies	**Course number(s) & name(s)** or other educational requirements**	**Specific assessment opportunity**
Public Health Communication: Students should be able to communicate public health information, in both oral and written forms and through a variety of media, to diverse audiences		
Oral communication	PH 303 Climate Change, the Environment and Human Health	Students work both independently and in groups throughout the semester to identify a significant public health problem linked to climate change, find published research that supports the connection, survey the public on their knowledge about the climate change issue and its connection to public health, and propose a strategy for adaptation and mitigation of the problem. Students present their work to the class and submit written work for evaluation. For the oral presentation, students choose the most applicable format to present an "executive summary" of their findings, starting with a brief introduction to the climate change – public health connection, including at least one key piece of data that documents the connection. They next present the mitigation/adaptation plan for the problem and conclude with key and/or surprising results obtained via the survey they created.
	PH 455 Public Health Research Methods II	Each student demonstrates competency in public health data visualization and dissemination by creating their own public health data dashboard using the Tableau dashboard platform. The student-created dashboard displays data on an important public health issue, in a way that is friendly for public consumption. Students present their dashboards to their peers during the last class (in spring 2021 the presenters used an online platform because of COVID-19 but usually the presentations are in person).
	PH 600 Public Health Integrative Experience	Each student participates in a mock interview for a real public health practice position with two interviewers (MPH alumni, community practice partners, doctoral students). Students first participate in a workshop that teaches job interview skills. The interviewers give each student feedback, and the whole group reconvenes at the end of the interviews to debrief the experience.

Table D11-1 Public Health Bachelor's Degree Foundational Competencies		
Competencies	**Course number(s) & name(s)** or other educational requirements**	**Specific assessment opportunity**
Written communication	PH 101 Introduction to Public Health	Utilizing the PERIE (problem, etiology, recommendation, implementation, and evaluation) structured framework, students systematically examine factors associated with one HP2030 Leading Health Indicator through scaffolded assignments, peer review, and a final 5-page written report.
	PH 302 Health Concepts and Contexts	Throughout the semester, each student independently conducts research and writes three papers that build on one another to culminate in a final fourth paper. Students select a diagnosis or health outcome and explore four different aspects of it: 1) diagnosis and biology; 2) history; 3) culture and social practices; and 4) politics and resistance. Any revisions required of previous papers must be fully incorporated into the final paper, which must have sections that flow together into a well-organized paper.
	PH 428 Program Implementations and Evaluation for a Healthy Society	Students are required to write a detailed evaluation plan for their proposed public health program. The plan includes an introduction, stakeholder assessment, background and description of the program, evaluation focus, planned data collection indicators and methods, analysis methods, and a dissemination and use plan, including clearly defined audience(s) and a plan for how, where, and when the findings be used.
Communicate with diverse audiences	PH 327 Foundations for Action in Public Health	Students write either an *advocacy letter to a politician*, an *op-ed for a local newspaper*, or a *position statement for an organization* regarding a public health problem and advocate for action through a specific policy or program.
	PH 455 Public Health Research Methods II	Each student demonstrates competency in public health data visualization and dissemination by creating their own public health data dashboard using the *Tableau dashboard platform*. The student-created dashboard displays data on an important public health issue, in a way that is *friendly for public consumption*. Students present their dashboards to their peers during the last class (in spring 2021 the presenters used an online platform because of COVID-19 but usually the presentations are in person).
	PH 600 Public Health Integrative Experience	During their 120-hour field site placement in a public health practice setting, students produce written reports, and in some cases infographics, for their field placement organization and a final report for course. The audience for the organization report varies based on the project, but can include the *project team, board, other staff, and/or organization partners, stakeholders, and community members*).

Table D11-1 Public Health Bachelor's Degree Foundational Competencies		
Competencies	**Course number(s) & name(s)** or other educational requirements**	**Specific assessment opportunity**
Communicate through variety of media	PH 303 Climate Change, the Environment and Human Health	Students work both independently and in groups throughout the semester to identify a significant public health problem linked to climate change, find published research that supports the connection, survey the public on their knowledge about the climate change issue and its connection to public health, and propose a strategy for adaptation and mitigation of the problem. Students present their work to the class and submit written work for evaluation. For the oral presentation, students choose the most applicable format to present an "executive summary" of their findings, starting with a brief introduction to the climate change – public health connection, including at least one key piece of data that documents the connection. They next present the mitigation/adaptation plan for the problem and conclude with key and/or surprising results obtained via the survey they created.
	PH 319 Introduction to Health Disparities	Students produce an *infographic or podcast* that conveys the importance of a health equity topic. Student first identify the audience for their project. The infographic/podcast then introduces the significance of the public health problem; illustrates and/or describes the health inequity; and offers evidence-based solutions for addressing the inequity.
	PH 455 Public Health Research Methods II	Each student demonstrates competency in public health data visualization and dissemination by creating their own public health data dashboard using the *Tableau dashboard platform*. The student-created dashboard displays data on an important public health issue, in a way that is friendly for public consumption. Students present their dashboards to their peers during the last class (in spring 2021 the presenters used an online platform because of COVID-19 but usually the presentations are in person).

Table D11-1 Public Health Bachelor's Degree Foundational Competencies		
Competencies	**Course number(s) & name(s)** or other educational requirements**	**Specific assessment opportunity**
Information Literacy: Students should be able to locate, use, evaluate and synthesize public health information		
Locate information	PH 101 Introduction to Public Health	***Academic Evidence Assignment***: Students practice locating and identifying appropriate evidence for their final paper project. Students are directed to eight data sources/databases and are asked to provide a summary of the type of information found on each site. The sites include PubMed, Google Scholar, CDC, Public Health Newswire, and the Wisconsin Dept of Health and Human Services, among others. ***HP2030 Final Project Paper***: Utilizing the PERIE (problem, etiology, recommendation, implementation, and evaluation) structured framework, students systematically examine factors associated with one HP2030 Leading Health Indicator through scaffolded assignments, peer review, and a final 5-page report. For each assignment, students must locate and apply different types of information. For example, for part 1, they must find related objectives and baseline statistics related to Leading Health Indicators, identify groups with higher risk, and use data to list and support their selected at-risk population. Other parts of the assignment require citing scientific support evidence such as sources to indicate that their potential interventions are evidence-based.
	PH 303 Climate Change, the Environment and Human Health	Students work both independently and in groups throughout the semester to identify a significant public health problem linked to climate change, find published research that supports the connection, survey the public on their knowledge about the climate change issue and its connection to public health, and propose a strategy for adaptation and mitigation of the problem. For the first paper, each team member independently uses library resources to find research published within the last four years that documents a connection between climate change and a public health issue. All research must be from a peer-reviewed research article or a secondary source and have at least one graph or table.
	PH 355 Public Health Research Methods I	*Literature review assignment*: Students conduct a literature search on their chosen topic to find 6 relevant articles, including at least two quantitative studies and at least two qualitative studies. For each article selected, students then write a short summary that describes the research questions and research methods.
Use information	PH 201 & 202 Public Health from Cells to Society I and II	In weekly lab activities, students locate information from scientific literature, gray literature, government reports, and documentary films, among other sources, as they apply key public health concepts from lecture and learning objectives to real world public health problems.

Table D11-1 Public Health Bachelor's Degree Foundational Competencies		
Competencies	**Course number(s) & name(s)** or other educational requirements**	**Specific assessment opportunity**
	PH 303 Climate Change, the Environment and Human Health	Students work both independently and in groups throughout the semester to identify a significant public health problem linked to climate change, find published research that supports the connection, survey the public on their knowledge about the climate change issue and its connection to public health, and propose a strategy for adaptation and mitigation of the problem. One part of this project requires that each team member submit 1-3 additional pieces of data on the climate change - public health connection. The team then creates an outline that documents the climate change - human health connection using best data discovered by team members.
	PH 455 Public Health Research Methods II	Each student demonstrates competency in public health data visualization and dissemination by creating their own public health data dashboard using the Tableau dashboard platform. Students create the dashboard displays using data on an important public health issue, in a way that is friendly for public consumption. Students present their dashboards to their peers during the last class.
Evaluate information	PH 303 Climate Change, the Environment and Human Health	Students work both independently and in groups throughout the semester to identify a significant public health problem linked to climate change, find published research that supports the connection, survey the public on their knowledge about the climate change issue and its connection to public health, and propose a strategy for adaptation and mitigation of the problem. One part of this project requires that each team member submit 1-3 additional pieces of data on the climate change - public health connection. The team then creates an outline that documents the climate change - human health connection using *best* data discovered by team members.
	PH 410 True Lies: Consuming and Communicating Quantitative Information	PH 410 trains students in critical quantitative thinking skills, from elementary statistics and logic to causal inference and data visualization. Throughout the course, students complete assignments (weekly quizzes, group applied lab activities, and a midterm and final exam) that require them to compute and evaluate statistics and quantitative information. Students also examine how statistics in both primary scientific publications as well as mass-media reports can be used to mislead an audience.

Table D11-1 Public Health Bachelor's Degree Foundational Competencies		
Competencies	**Course number(s) & name(s)** or other educational requirements**	**Specific assessment opportunity**
	PH 428 Program Implementations and Evaluation for a Healthy Society	Students are required to write a detailed evaluation plan for their proposed public health program. The plan includes an introduction, stakeholder assessment, background and description of the program, evaluation focus, planned data collection indicators and methods, analysis methods, and a dissemination and use plan. The data collection section requires students to articulate a plan for gathering credible evidence to support their evaluation. The data analysis section requires students to describe analytical strategies they will use to analyze their evaluation data, including quantitative or qualitative techniques, and types of statistical analyses if applicable.
Synthesize information	PH 302 Health Concepts and Contexts	Throughout the semester, each student independently conducts research and writes three papers that build on one another to culminate in a final fourth paper. Students select a diagnosis or health outcome and explore four different aspects of it: 1) diagnosis and biology; 2) history; 3) culture and social practices; and 4) politics and resistance. Any revisions required of previous papers must be fully incorporated into the final paper, which must have sections that flow together into a well-organized paper. As well, students must provide strong evidence for arguments presented in the paper with supporting evidence from scholarly sources.
	PH 455 Public Health Research Methods II	Students work both independently and in groups to complete two research projects. ***Qualitative research project***: Students identify a research question, independently conduct a qualitative interview and transcribe it, work as a team to analyze the combined data and summarize the findings, and then individually synthesize/summarize the main findings and write a self-reflection. ***Quantitative research project***: Students identify a research question, design and implement a survey using Qualtrics, analyze the survey data and generate descriptive displays, and then write an individual synthesis/summary of findings and a self-reflection.
	PH 600 Public Health Integrative Experience	Each student integrates and synthesizes information/data/best practices from a variety of sources as part of their final written report for their 120-hour integrative experience at a public health practice placement site.

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

See ERF D11.2 for syllabi for each course listed in Table D11-1 and select supplementary assignment guidelines.

From Table D11-1. Public Health Bachelor's Degree Foundational Competencies
PH 101 Introduction to Public Health
PH 201 & 202 Public Health from Cells to Society I and II
PH 302 Health Concepts and Contexts
PH 303 Climate Change, the Environment and Human Health
PH 319 Introduction to Health Disparities
PH 327 Foundations for Action in Public Health
PH 355 Public Health Research Methods I
PH 410 True Lies: Consuming and Communicating Quantitative Information
PH 428 Program Implementations and Evaluation for a Healthy Society
PH 455 Public Health Research Methods II
PH 600 Public Health Integrative Experience

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

Strengths: All BSPH students complete 54 credits of required Public Health major courses (18 3-credit courses total) that provide numerous assessments and opportunities to develop skills in communicating public health information, in both oral and written forms, through a variety of media, and to diverse audiences, and in locating, using, evaluating, and synthesizing various types of public health data and information. A sampling of those assessments and opportunities is listed in Table D11-1.

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

Students have opportunities to integrate, synthesize and apply knowledge through cumulative and experiential activities. All students complete a cumulative, integrative and scholarly or applied experience or inquiry project that serves as a capstone to the education experience. These experiences may include, but are not limited to, internships, service-learning projects, senior seminars, portfolio projects, research papers or honors theses. Schools encourage exposure to local-level public health professionals and/or agencies that engage in public health practice.

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

   All BSPH students complete PH 600 Public Health Integrative Experience in their last semester. A total of twelve students have completed PH 600 to date. Three students took the course in Fall 2020, six students took the course in Spring 2021, and three students in Fall 2021. This course is not currently offered in the summer. Project locations included non-profits (2), local health departments (7), the UWM student health center (2), and Children's Wisconsin. All projects prior to Fall 2021 were completed virtually due to the COVID-19 pandemic. In Fall 2021, two of three projects had some in-person components. The course is described in Table D12.1 below.

Table D12-1 Public Health Integrative Experience	
Cumulative and Experiential Activity (internships, research papers, service-learning projects, etc.)	**Narrative describing how activity provides students the opportunity to integrate, synthesize and apply knowledge.**
PH 600 Public Health Integrative Experience (3)	Students complete a 120-hour integrative field experience with an agency. In the semester prior to enrolling in PH 600 students work with their undergraduate public health advisor and the Zilber School Community Engagement Coordinator to identify a project that includes completion of at least one product that is defined between the site preceptor and student. The students demonstrate synthesis of the two Public Health Bachelor's Degree Foundational Competencies and one Domain of their choice through activities based on previous coursework and application of their knowledge to the project. The students also address five cross-cutting concepts: independent work and personal work ethic, networking, organizational dynamics, professionalism, and teamwork and leadership. During the placement, students keep an Activity Log to track hours, align tasks with competencies, reflect on challenges and successes, and share observations about leadership and organizational dynamics. This course meets twice for group discussion of and reflection on professionalism and teamwork and leadership. They share observations on successes and challenges related to attaining the competencies through their projects. In addition, PH 600 students participate in a Mock Interview with two interviewers (alumni, community partners, doctoral students) to demonstrate professionalism. Prior to the interview,

Table D12-1 Public Health Integrative Experience	
Cumulative and Experiential Activity (internships, research papers, service-learning projects, etc.)	**Narrative describing how activity provides students the opportunity to integrate, synthesize and apply knowledge.**
	students are required to revise their resume and participate in a resume critique with the UWM Career Services Office, create application materials – including a cover letter – for an entry-level public health position, and participate in a class session on interview techniques. The interviewers give each student feedback, and the whole group reconvenes at the end of the class to debrief the experience. The preceptor completes an evaluation based on assessment of each student's work and the product submitted. Students write a final reflection paper where they share how they attained the competencies/selected domain and cross-cutting concepts. The course instructor assesses both the product and course materials and assigns the final letter grade.

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

Among students' products for their Integrative Experiences were reports, social media posts, COVID-19 news briefs and data summaries, and a flow chart for identifying grant opportunities. Each student also wrote a final report reflecting on their experience and describing how they attained the competencies/selected domain/cross-cutting concepts. Table D12.2 below lists the projects, placement sites, and products completed in AY 2020-21. See ERF D12.2 for examples of the students' products.

Table D12.2 List of PH 600 Integrative Experience Projects, Placement Sites, and Products, Fall 2020 – Fall 2021		
Project	**Placement Site**	**Products**
Southeast Wisconsin Watershed Trust Webinars	Sweet Water; Milwaukee, WI	Graphic Report on findings from 3 Science and Policy Committee webinars to guide development of a playbook
Promoting Mental Wellbeing of Pregnant and Postpartum Women	Cudahy Health Department; Cudahy, WI	Report on Internet-based interventions for postpartum depression
Gathering Perspectives through the Local Voices Network	Foundation for Black Women's Wellness; Madison, WI	Report on findings from focus groups
Community Alliance Coalition Social Media Campaign	Greendale Health Department; Greendale, WI	Annotated compilation of social media posts on substance misuse
COVID-19 Vaccine Portfolio Project	City of Milwaukee Health Department; Milwaukee, WI	Weekly reports and data summaries

Table D12.2 List of PH 600 Integrative Experience Projects, Placement Sites, and Products, Fall 2020 – Fall 2021		
Project	**Placement Site**	**Products**
Mental Health Resources Roadmapping	Adams County Human and Health Services Department; Friendship, WI	Resource Inventory of Mental Health Providers in Adams County
Landscape of Funding Opportunities	Adams County Human and Health Services Department; Friendship, WI	Report on grant opportunities with decision-making tool
1st Evaluation of YOU@UWM	UWM Norris Health Center; Milwaukee, WI	Interview guide, evaluation summary report
Community Education on COVID-19 Vaccination	Dodge County Human Services and Health Department; Juneau, WI	COVID-19 Vaccination Outreach and Education Infographic (English & Spanish)
Evaluation Tools for Triple P Program	Children's Wisconsin; Milwaukee, WI	Evaluation Tool for Triple P Program onboarding process
Peer Outreach through COVID-19 Peer Ambassador Program	UWM Norris Health Center (Health Promotion & Wellness); Milwaukee, WI	Lit review on best practices among area campuses and survey instrument for students
Postpartum Family Planning Project	Cudahy Health Department; Cudahy, WI	Lit review on family planning and contraception options and infographic

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

The goal of the PH 600 course is for students to integrate theory and knowledge in a practice setting. Students are introduced to the PH 600 Public Health Integrative Experience in a required workshop the semester before they take the course. The Community Engagement Coordinator describes the process for identifying a site and preceptor, reviews the timeline, and presents the Learning Agreement. After the workshop, students are invited to send her their resumes and list any particular interests and potential sites.

The Community Engagement Coordinator works with students to find a placement. Some placements are already identified through a site proposal process. In other cases, the Community Engagement Coordinator reaches out to specific organizations based on the student's interests. Students may find the placement based on prior/existing connections. The Community Engagement Coordinator convenes meetings between students and preceptors to go over course requirements, confirm projects, and identify the required product. A key focus is determining fit between the student and preceptor and confirming that the product will enable students to synthesize course material and public health project content as well as apply skills in the field. The student drives the Learning Agreement process. The preceptor and course instructor review drafts, and once the student finalizes the document, the Learning Agreement is signed by the student, preceptor, and course instructor.

Both the course instructor and Community Engagement Coordinator keep in touch with the student and preceptor during the semester. They provide regular updates to the students and preceptors. The course instructor interacts with the students during the classes and the Mock Interview event and reviews the Activity Logs. The Community Engagement Coordinator, meanwhile, conducts mid-semester check-in meetings with the preceptors. Everyone is urged to be in touch via email as soon as possible with any questions or concerns about progress in the field work.

The course instructor assesses the student's products and the Final Report for quality of integration and synthesis of knowledge and for evidence regarding attainment of the competencies/selected domain and cross-cutting concepts. In addition to the Final Report, the student completes an evaluation and writes a Thank You letter to the preceptor. The preceptor completes an evaluation. The products and course materials provide evidence of the student's performance in meeting the PH 600 course requirements.

4) Include handbooks, websites, forms and other documentation relating to the cumulative experience and field exposure. Provide hyperlinks to documents if they are available online, or include electronic copies of any documents that are not available online.

See ERF 12.4 for the course syllabus, learning agreement form, Activity Log, final report instructions, and UWM Resume and Cover Letter Guide. Students access the Career Planning and Resource Center (CPaRC) for resources about writing cover letters, preparing resumes, and honing interview skills.

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

The overall undergraduate curriculum and public health major curriculum expose students to concepts and experiences necessary for success in the workplace, further education and lifelong learning. Students are exposed to concepts through any combination of learning experiences and co-curricular experiences.

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

   Table D13-1 details examples of courses and experiences designed to prepare students in each cross-cutting concept.

Table D13-1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	
Concept	**Manner in which the curriculum and co-curricular experiences expose students to the concepts**
Advocacy for protection and promotion of the public's health at all levels of society	**PH 202 Public Health from Cells to Society II**: In unit 3 (modules 7-11) students complete lab activities in which they discuss and analyze historical and contemporary social policies related to a range of societal determinants of health inequities and analyze how legislators, policymakers, and various social movements (e.g., labor, reproductive justice, environmental justice) and grassroots community advocates (e.g., housing activists) challenge social and health inequities.
	PH 302 Health and Disease: Concepts and Contexts: Students discuss and analyze historical and contemporary health-related activism and their contributions to public health knowledge and practice (e.g., community health centers, disability rights movement, etc.) throughout the course. In their final paper, they answer the questions: Have individuals or groups with your study diagnosis engaged in activism, legal battles, or other forms of organizing to fight for medical care, civil rights, or other demands? What was the role of public health officials in these struggles?
	PH 327 Foundations for Action in Public Health: Students write either an advocacy letter to a politician, an op-ed for a local newspaper, or a position statement for an organization regarding a public health problem and advocate for action through a specific policy or program.
Community dynamics	**PH 319 Introduction to Health Disparities**: Students reflect on and analyze community dynamics throughout the course whereby an emphasis is placed on exploring the impacts of power, privilege, and how we show up in public health equity work.
	PH 427 Strategies for Action in Public Health: Students are exposed to complex Community Health Needs Assessments through course readings and discussion. The Final Program Planning Project requires students to articulate community needs and assessment and asset identification processes.
	PH 428 Program Implementation & Evaluation for a Healthy Society: Students are exposed to this concept when they discuss the community needs assessment, resource allocation, and stakeholders for their program.

Table D13-1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	
Concept	**Manner in which the curriculum and co-curricular experiences expose students to the concepts**
Critical thinking and creativity	**PH 302 Health and Disease: Concepts and Contexts**: Each course unit is designed for students to engage via online/in class discussion and on assignments in asking critical questions. For PH 302, this means exploring the limits of ideas about health and what those ideas make possible: Who or what gets included according to particular health concepts? Who or what gets excluded? What are the public health implications of those inclusions and exclusions? Students have opportunities to engage creatively through assignments, using both visual, arts-based, and writing elements, to demonstrate their understanding and synthesis of course content.
	PH 410 True Lies: Consuming and Communicating Quantitative Information: This course trains students in critical quantitative thinking skills, from elementary statistics and logic to causal interference and data visualization.
	PH 455 Public Health Research Methods II: Students decide upon a public health topic, generate a research question, create both qualitative and quantitative data collection strategies, and then implement this plan to collect, analyze, and disseminate the data.
Cultural contexts in which public health professionals work	**PH 142 Exploring Global Environmental Health**: The course presents various issues associated with global cultural norms associated with environmental health. For example, water usage and wastewater treatment differences based upon culture, resources, and socioeconomic conditions.
	PH 302 Health and Disease: Concepts and Contexts: Several course units cover the role of culture and public health, with a particular emphasis on how dominant Western culture influences public health research and practice. For example, students evaluate differences in interpretation of racial health disparities using a traditional biomedical model (individualism, personal responsibility, etc.) and John Henryism. In their third paper, students write about their health outcome of choice, and they assess the role of culture (across time and place) in shaping different understandings of their health outcome.
	PH 427 Strategies for Action in Public Health: Course readings, guest lectures, group discussions, and individual written reflections address community engagement principles, cultural context in program planning, and cultural humility.
Ethical decision making as related to self and society	**PH 202 Public Health from Cells to Society II**: Students are exposed to fundamentals of self-reflexivity as a process for assessing the implications of one's social positions in relation to others. Students also complete modules that address ways that public health and medicine have historically engaged in unethical practices such as experimentation on enslaved Africans, the Tuskegee Syphilis Experiment, forced sterilization of women of color, and experiments involving radiation. Students learn about the Nuremberg Codes.
	PH 327 Foundations for Action in Public Health: Three weeks of class (and associated readings) are devoted to ethical issues in the practice of public health, including ethical practices when working with individual, communities, and populations.

Table D13-1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	
Concept	**Manner in which the curriculum and co-curricular experiences expose students to the concepts**
	PH 355 and 455 Public Health Research Methods I and II: In PH 355 students complete the CITI Human Subjects Research Training. In PH 455, ethical considerations for qualitative and quantitative research are discussed throughout two course projects.
Independent work and a personal work ethic	**PH 201 and PH 202 Public Health from Cells to Society I and II**: These courses use active learning pedagogy. Students are required to both complete work in small teams during the weekly lab sessions and after lab they must independently synthesize and submit answers to the lab activity questions that reflect their own thinking.
	PH 455 Public Health Research Methods II: Students must complete individual writing and reflection assignments for both qualitative and quantitative projects. Students individually complete a data dashboard project, which requires time management and personal work ethic to complete.
	PH 600 Public Health Integrative Experience: Individual work on a 120-hour field placement project in a public health agency requires students to manage their time, akin to a workplace setting, and apply themselves to completing the tasks and final product.
Networking	**PH 319 Introduction to Health Disparities**: Course includes multiple guest presenters who are practicing public health professionals; they are exposed to various community based public health resources and encouraged to build a network of health equity connections/resources during class.
	PH 600 Public Health Integrative Experience: Through their 120-hours at a field placement site, students meet and interact with a range of people, learning about their roles and organizations; students interact with interviewers (school partners, alumni, doctoral students) during the course Mock Interview event; reflections on cross-cutting concepts are incorporated in the course Final Report.
Organizational dynamics	**PH 319 Introduction to Health Disparities**: Course incorporates review of individual, organizational/institutional, and system dynamics at play when discussing health equity and addressing the structural determinants of health.
	PH 600 Public Health Integrative Experience: Through 120-hour field placement sites, students observe different leadership styles and learn about the role of the organization in the community; students discuss organizational dynamics in the context of their projects in two class sessions. Reflections on cross-cutting concepts are incorporated in the course Final Report.

Table D13-1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	
Concept	**Manner in which the curriculum and co-curricular experiences expose students to the concepts**
Professionalism	**PH 303 Climate Change, the Environment and Human Health**: Course uses active learning pedagogy in a multipart term project that is completed throughout the semester. Students work purposefully in groups; they learn to establish roles and responsibilities for team success, develop a plan for shared leadership and accountability, and plan for potential conflicts. Each part of the project involves both individual and group products, teaching students the importance of professionalism, including effective communication and mutual accountability.
	PH 600 Public Health Integrative Experience: Students discuss professionalism in two class sessions. They practice professional skills in the Mock Interview event, including preparing a resume and cover letter, and being interviewed for an actual position. At placement sites, students are expected to conduct themselves in appropriate ways related to dress, communication, and meetings. Reflections on cross-cutting concepts are incorporated in the course Final Report.
Research methods	***Quantitative methods*: KIN 270 Statistics in the Health Professions: Theory and Practice and PH 410 True Lies: Consuming and Communicating Quantitative Information**: In these courses, students analyze epidemiological and other quantitative data by hand, learn data visualization techniques, and interpret results in homework assignments and exams.
	***Mixed methods*: PH 355 and 455 Public Health Research Methods I and II**: This two-semester course sequence involves objectives/activities that first introduce students to core research paradigms and methodologies and then students design and execute mini qualitative and quantitative research projects as well as data dissemination through a data dashboard project using Tableau.
	***Laboratory methods applied to public health*: PH 346 Environmental Health and Disease**: In the laboratory portion of the course, students use digital microscopy to collect data. Once images have been collected, students measure various parameters from their images and then analyze data sets as would be done in a laboratory context. Students are introduced to techniques and methods associated with basic science research and how these apply to public health. In conjunction with the lecture component of the course, students are also introduced to animal models and how animal model research can help inform public health.
	***Evaluation methods*: PH 428 Program Implementation & Evaluation for a Healthy Society**: Students are exposed to research methods when they discuss evaluation design, data collection, and data analysis. Part three of the final project requires that students develop a measurement plan and draft a survey questionnaire. Part five requires students to develop an evaluation plan for their proposed health promotion program.
Systems thinking	**PH 142 Exploring Global Environmental Health**: Course provides introduction to biological, ecological, and other systems and their interconnections.

Table D13-1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences	
Concept	**Manner in which the curriculum and co-curricular experiences expose students to the concepts**
	PH 319 Introduction to Health Disparities: Introduces students to public health equity work that targets system changes; students delve into systems thinking. A guest lecturer runs an in-class workshop on the SAT (structures; attitudes; transactions) model to uncover macro and micro level issues to complex social problems. Attendees create a mapping project around gun violence, exploring ways to incorporate the SAT model into their current practice, and conclude with a discussion of community mapping.
	PH 408 Comparative Health Systems: A Social Determinants Approach: Throughout the course, students engage in viewing healthcare as a system, with discrete building blocks, functional domains, transactions, and feedback loops, and in placing it in the historical, cultural, and socioeconomic contexts of the country studied.
Teamwork and leadership	**PH 201 and PH 202 Public Health from Cells to Society I and II**: These courses use active learning pedagogy. Students are required to work in small teams during the weekly lab sessions to apply key public health concepts from lecture and learning objectives to public health problems. In both courses, students are assessed on leadership by their contributions to keeping the group on task, recording answers in the group google doc, and report backs to the full class.
	PH 303 Climate Change, the Environment and Human Health: Course uses active learning pedagogy in a multipart term project that is completed throughout the semester. Students work purposefully in groups; they learn to establish roles and responsibilities for team success, develop a plan for shared leadership and accountability, and plan for potential conflicts. Each team discusses and documents team ground rules and develops a team contract.
	PH 600 Public Health Integrative Experience: Students become part of an organization team during their 120-hour field placement projects; they experience working with a range of staff and external partners/stakeholders in collaborative ways. Students discuss teamwork in two class sessions. Reflections on cross-cutting concepts is incorporated into the course Final Report.

2) Provide syllabi for all required coursework for the major and/or courses that relate to the domains listed above. Syllabi should be provided as individual files in the electronic resource file and should reflect the current semester or most recent offering of the course.

See ERF D13.2 for the syllabi for the courses listed in Table D13-1.

From Table D13-1 Public Health Bachelor's Degree Cross-Cutting Concepts and Experiences
PH 142 Exploring Global Environmental Health
PH 201 Public Health from Cells to Society I
PH 202 Public Health from Cells to Society II
PH 302 Health and Disease: Concepts and Contexts
PH 303 Climate Change, the Environment and Human Health
PH 319 Introduction to Health Disparities

PH 327 Foundations for Action in Public Health
PH 346 Environmental Health and Disease
PH 355 Public Health Research Methods I
PH 408 Comparative Health Systems: A Social Determinants Approach
PH 410 True Lies: Consuming and Communicating Quantitative Information
PH 427 Strategies for Action in Public Health
PH 428 Program Implementation & Evaluation for a Healthy Society
PH 455 Public Health Research Methods II
PH 600 Public Health Integrative Experience
KIN 270 Statistics in the Health Professions: Theory and Practice

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

Strengths: The required BSPH public health major coursework (54 credits), including the 120-hour public health integrative experience at a public health practice site, provides numerous opportunities for students to further develop their readiness for success in the workforce, prepare for further studies, and promote lifelong learning.

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.**

   All MPH students complete foundational coursework in the core disciplines of public health knowledge (5 courses, 15 credit hours), receive academic and applied instruction in their specific track area (22 to 24 credit hours), successfully complete a Field Experience (3 credit hours) and Leadership in Public Health course (1 credit hour) as well as a culminating experience (Capstone; 2 credit hours). The degree requirements for the MPH range from 46 - 49 credit hours of course work depending on the track. Students must maintain a cumulative G.P.A. of 3.0 or better in order to progress through the program. These degrees can be completed full-time or part-time. Although a student is entitled to take up to seven years to complete the MPH Program degree, a full-time student can complete the degree in two years. Part-time students generally complete the degree in three to four years.

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

   UWM operates on a semester calendar. Instruction is scheduled during 15- or 16-week fall and spring semesters; a 3-week intersession between fall and spring semesters; and summer sessions of varying lengths. The credit hour assignment for a graduate course is made at the time a course is approved by the UWM Graduate Curriculum Committee (GCC). Study leading to one semester credit represents an investment of time by the average student of not fewer than 48 hours for class contact in lectures, for laboratories, examinations, tutorials and recitations, and for preparation and study; or a demonstration by the student of learning equivalent to that established as the expected product of such a period of study.

D15. DrPH Program Length

NOT APPLICABLE

D16. Bachelor's Degree Program Length

A public health bachelor's degree requires completion of a total number of credit units commensurate with other similar degree schools in the university.

Schools use university definitions for credit hours.

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

   At UWM, all bachelor's degrees require at least 120 credits. See https://catalog.uwm.edu/policies/undergraduate-policies/

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

   UWM has established (see credit hour policy) that "study leading to one semester credit represents an investment of time by the average student of not fewer than 48 hours for class contact in lectures, for laboratories, examinations, tutorials and recitations, and for preparation and study; or a demonstration by the student of learning equivalent to that established as the expected product of such a period of study." Each course syllabus is required to have a workload statement that includes a statement of time investment by the average student and details the percent effort or hours students can expect to spend on each major activity of the course (e.g., lecture, specific assignments, reading/studying, etc.). The total effort for a 3-credit course must be a minimum or average of 144 hours (48 x 3).

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

   One of the BPSH advisors is designated to work with all incoming and potential transfer students. Once a transfer student has applied and been accepted to the BSPH program, the academic advisor runs a transfer equivalency report.

   The transfer equivalency process consists of the advisor utilizing the Transferology portal or Transfer Equivalency Database (TED) to look up all classes the student took at outside institutions, including community colleges as well as 4-year institutions. The advisor identifies which courses transfer into UWM. Once all courses have been accounted for, the advisor then determines which courses count for the Public Health major and formulates an academic plan for the transfer student. If the academic advisor has any questions or concerns regarding equivalencies for the Public Health major, they consult with the Zilber School Undergraduate Program Director. This plan outlines all the remaining courses the student will have to take to obtain the BSPH degree. See ERF D16.3 for the visual map of this process.

   If a course is not listed in Transferology, the advisor contacts the Transfer Admissions Office. This office evaluates the course to determine if it meets any UWM course requirement.

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

   UWM has articulation agreements with the Milwaukee Area Technical College (MATC) and the UMW Branch campuses at Waukesha and Washington Counties that apply to the BSPH. Students can find information about transferring courses at https://uwm.edu/onestop/your-student-record/transfer-credits/transferring-course-credits/. This page includes the details for MATC and the Waukesha and Washington County Campuses.

5) **Provide information about the minimum credit-hour requirements for coursework for the major in at least two similar bachelor's degree programs in the home institution.**

All bachelor's degrees at UWM require at least 120 credits. Comparable 120-credit bachelor's degree programs at UWM are the BS in Kinesiology and the BS in Biomedical Sciences – Health Sciences Submajor, both in the College of Health Sciences, the BA in Global Studies – Global Health track in the College of Letters & Science, and the BS in Social Work in the Helen Bader School of Social Welfare.

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.**

The Zilber School added the MS degree in Biostatistics in Fall 2019. MS students complete 33 credits of required courses, including the thesis, and 9 credits of elective courses, for a total of 42 credits, as listed below.

The Zilber School added the MS degree in Biostatistics in Fall 2019. MS students complete 33 credits of required courses, including the thesis, and 9 credits of elective courses, for a total of 42 credits, as listed below.

Required Courses (33 credits)
PH 702 Introduction to Biostatistics, 3 credit
PH 704 Principles & Methods of Epidemiology, 3 credit
PH 711 Intermediate Biostatistics, 3 credit
PH 712 Probability and Statistical Inference, 3 credit
PH 715 Applied Categorical Data Analysis, 3 credit
PH 716 Applied Survival Analysis, 3 credit
PH 717 Applied Longitudinal Analysis, 3 credit
PH 718 Data Management, Visualization, and Advanced Statistical Computing, 3 credit
PH 801 Seminar in Public Health Research, 3 credit
PH 813 Practice of Biostatistical Consulting, 3 credit
PH 895 Research and Thesis for MS in Biostatistics, 3 credit
Required Subject Matter "S" electives (Choose two courses, 6 credit.)
PH 714 Statistical Genetics and Genetic Epidemiology, 3 credit
PH 721 Intro. To Translational Bioinformatics, 3 credit
PH 722 An Introduction to Bayesian Statistics, 3 credit
PH 723 Clinical Trials (3) PH812 Statistical Learning and Data Mining, 3 credit
PH 812 Statistical Learning & Data Mining, 3 credit
PH 818 Statistical Computing, 3 credit
ED PSY 823 Structural Equation Modelling, 3 credit
ED PSY 832 Theory of Hierarchical Linear Modeling, 3 credit
CS 708 Scientific Computing, 3 credit
CS 711 Pattern Recognition – Statistical, Neural, and Fuzzy Approaches, 3 credit
Elective (Choose 1 course, 3 credits; other courses as approved)
PH 703 Environmental Health Sciences, 3 credit
PH 705 Public Health Policy and Administration, 3 credit
PH 706 Perspectives in Community and Behavioral Health, 3 credit
BIOL 597 RNA Structure, Function, and Metabolism, 3 credit
BIOL 490 Molecular Genetics, 3 credit

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.**

MS students meet the 12 Foundational Knowledge Objectives (FKOs) through three courses as presented in Table D17-1 below. Two courses focus on FKO #3 (PH 704/Principles and Methods of Epidemiology and PH 711/Intermediate Biostatistics). The third course, PH 801 Seminar in Public Health Research, emphasizes the remaining Objectives. MS students benefit from the discussions with the doctoral students about research and application of methodological concepts to their thesis projects.

Table D17-1 Content Coverage for Academic Degree in a Public Health Field – MS in Biostatistics

Content	Course number(s) and name(s)	Specific Assessment Opportunity
1. Explain public health history, philosophy and values	PH 801 Seminar in Public Health Research	*Content*: Covered in Week 2; Syllabus, pp., 2, 5-6 *Assessment*: Ecological Framework 6-page paper: presentation on chosen public health condition – Weeks 2, 4-5
2. Identify the core functions of public health and the 10 Essential Public Health Services	PH 801 Seminar in Public Health Research	*Content:* Covered in Week 2; Syllabus pp. 2, 6 *Assessment*: Ecological Framework 6-page paper: presentation on chosen public health condition – Weeks 2, 4-5
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PH 704 Principles and Methods of Epidemiology (QUANT)	*Content*: covered in Weeks 2-4, 7; Syllabus, pp. 10-12 *Assessment*: Problem sets (p. 4): students asked to calculate and explain appropriate usage of common measures of disease frequency used in epidemiology and public health; access and identify sources of public health data collected in U.S. and Wisconsin; calculate and interpret absolute and relative measures of comparison in health status between populations; identify study designs and estimate appropriate measures of association; assess and describe the impact of different types of bias on observed measures of association in epidemiologic studies; and assess and describe confounding and effect modification in epidemiologic studies.
	PH 711 Intermediate Biostatistics (QUANT)	*Content*: Weeks 7,16: Course project. *Assessment:* A data analysis project with several specific scientific questions will be assigned to the students after the first mid-term exam in Week 6. The students are expected to select the appropriate analysis

Table D17-1 Content Coverage for Academic Degree in a Public Health Field – MS in Biostatistics		
Content	**Course number(s) and name(s)**	**Specific Assessment Opportunity**
		method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students shall write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from SAS statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH711 but can improve model fitting. The report shall be written in a form that a non-statistician collaborator can understand. In the report, the student shall clearly write the method they use and the interpretation of their result. The peer review for classmates' projects will be part of each student's report.
	PH 801 Seminar in Public Health Research (QUAL)	*Content:* Covered in Weeks 3-5, 9-12; Syllabus, pp. 6-8, 9-11 *Assessment*: Research design comparison 8-page paper - Week 8 AND Article critiques - Weeks 4-9, 11-13
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	PH 801 Seminar in Public Health Research	*Content*: covered in Week 2 (Syllabus: p. 6) *Assessment*: Ecological Framework 9-page paper: 2 parts - Weeks 2 & 4, including 8-page paper on chosen public health condition, including how it fits in with major causes and trends of morbidity and mortality in the US or in the relevant community; AND presentation - Week 5
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 3-5 (Syllabus: pp. 6-8) *Assessments*: Ecological Framework 6-page paper: 2 parts - Weeks 2 & 4, including 8-page paper on chosen public health condition, and presentation - Week 5; Lit Review 20-page paper (Syllabus: p. 3): 4 parts on chosen topic with 5-8 research articles, including how the public health problem students have chosen can be addressed through primary, secondary,

Table D17-1 Content Coverage for Academic Degree in a Public Health Field – MS in Biostatistics		
Content	**Course number(s) and name(s)**	**Specific Assessment Opportunity**
		and tertiary prevention - Weeks 5-6, 11, 13, 15; and presentation - Week 14
6. Explain the critical importance of evidence in advancing public health knowledge	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 3-5 (Syllabus: pp. 6-8) *Assessment*: Research design comparison 8-page paper - Week 8 AND Article critiques - Weeks 4-9, 11-13
7. Explain effects of environmental factors on a population's health	PH 801 Seminar in Public Health Research	*Content:* covered in Week 6 *Assessment*: Ecological Framework 6-page paper: 2 parts - Weeks 2 & 4, including 6-page paper on chosen condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
8. Explain biological and genetic factors that affect a population's health	PH 801 Seminar in Public Health Research	*Content*: covered in Week 9 *Assessment*: Ecological Model 6-page paper: 2 parts for Weeks 2 & 4, including 6-page paper on chosen PH condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
9. Explain behavioral and psychological factors that affect a population's health	PH 801 Seminar in Public Health Research	*Content*: covered in Week 11 *Assessment*: Ecological Model 6-page paper: 2 parts for Weeks 2 & 4, including 6-page paper on chosen PH condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 9, 12 *Assessment*: Ecological Model 6-page Paper: 2 parts for Weeks 2 & 4, including 6-page paper on chosen PH condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
11. Explain how globalization affects global burdens of disease	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 3-5 *Assessment*: Reflection paper #1 on globalization - Week 6
12. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g., On Health)	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 3-5 *Assessment*: Reflection paper #2 on ecological perspective about connections among human, animal and ecosystem health - Week 7

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.**

Table D17-2 Assessment of Competencies for MS in Biostatistics		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1.Perform all responsibilities of a statistician in collaborative research; in particular: design studies, manage and analyze data and interpret findings from a variety of biomedical, clinical or public health experimental and observational studies	PH 813 Practice of Biostatistical Consulting	See Project #1-#5; Syllabus: pp. 5. For each consultation project, students get a data set for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test- related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
	PH 895 Research and Thesis for MS in Biostatistics	Thesis consists of an original data analysis and written report relevant to biomedical, clinical, or public health data.
2. Communicate statistical information effectively with individuals with varying degrees of statistical knowledge through written and oral presentations.	PH 813 Practice of Biostatistical Consulting	See Project #1-#5; Syllabus: pp. 5. For each consultation project, a data set is given to students for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
	PH 895 Research and Thesis for MS in Biostatistics	Thesis consists of an original data analysis and written report relevant to biomedical, clinical, or public health data. The thesis defense is also given to a broad audience of statistical experts as well as individuals with less extensive statistical knowledge.
3.Use statistical, bioinformatic and other computing software to organize, analyze, and visualize data.	PH 718 Data Management and Visualization in R	The final project tests each component of this competency. Students use the statistical software R. See ERF D17.9 for a description of the final project.
	PH 813 Practice of Biostatistical Consulting	Project #1-#5; Syllabus: pp. 5. For each consultation project, a data set is given to students for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test related

Table D17-2 Assessment of Competencies for MS in Biostatistics		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
4. Review and critique statistical methods and interpretation of results in published research studies, presentations, or reports.	PH 895 Research and Thesis for MS in Biostatistics	The literature review component of the master's thesis must satisfy this competency.
5.Understand and implement modern statistical approaches emerging in the literature to improve biomedical and public health	PH 813 Practice of Biostatistical Consulting	Project #1-#5; Syllabus: pp. 5. For each consultation project, a data set is given to students for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test-related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
	PH 895 Research and Thesis for MS in Biostatistics	The Master's thesis includes a significant data analysis component that will utilize modern statistical techniques.

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.

The required PH 813 Practice of Biostatistical Consulting course addresses a variety of public health research methods that are employed in the context of public health. The instruction includes modules on applied statistical analyses (such as exploratory data analysis and model selection) as well as on skills for communication of public health knowledge. Additional modules cover writing skills and clinical perspectives on the results of biostatistical analyses. The assessments include multiple project reports that are written for a broad public health audience and describe the results of statistical analyses, along with background information (i.e., brief literature review), description of study designs, and summary/conclusions of the research in the context of translating public health knowledge.

The PH 895 Research and Thesis for MS in Biostatistics also addresses how public health research methods are employed to foster discovery and translation of public health knowledge. Instruction in PH 895 takes the form of weekly meetings between students and their MS advisors. At these meetings, MS students are expected to present background on their topic, along with a description of data collection methods and proposed analyses. Advisors assist students in sharpening their hypotheses and proposed analyses. The assessment comes at the end of the course where students present their MS Thesis in a "seminar-style" format with questions and answers from their advisor as well as the general public, followed by an assessment of the actual written thesis.

The instruction and assessments in PH 813 and PH 895 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" are each equivalent to a three-semester credit-course.

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

In PH 895, students work closely with their MS advisors on producing the final research paper. At these meetings, MS students are expected to present background on their topic, along with a description of data collection methods and proposed analyses. Advisors assist students in sharpening their hypotheses and proposed analyses. The assessment comes at the end of the course where students present their MS Thesis in a "seminar-style" format with questions and answers from their advisor as well as the general public, followed by an assessment of the actual written thesis. The advisor grades the written thesis for: (a) appropriateness and sophistication of statistical analyses; (b) writing skill; (c) comprehensive understanding of background literature and public health context of the work; and (d) summary of the results and their potential impact for translating public health research findings into practice.

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.**

Policies and procedures for the final research project can be found here: https://catalog.uwm.edu/public-health/biostatistics-ms/#requirementstext

See ERF D17.9 for a description of the thesis course.

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.**

Since the inception of the MS in Biostatistics, two students have completed theses as titled below. See ERF D17-7 for the two samples.

#1: *Infant Mortality in the United States: Socioeconomic Factors Predicting Infant survival in Late Neo-Natal and Post Neo-Natal Infants from Birth Certificate Data;* Defense: April 27, 2020

#2: *Estimating COVID-19 Survival Rate and Inferring Case Severity with respect to Milwaukee County Policy Change Using Logistic Regression*; Defense: December 4, 2020

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.**

Faculty assess the MS students in the Foundational Knowledge Objectives in the courses listed above in Table D17-1. Each of these semester courses is three credits.

UWM has a campus credit hour policy, as found in Faculty Document #2838 (2012). All Zilber School syllabi include language that specifies the number of hours per credit that student can expect to spend in class and any labs and for completing all assignments. For a three-credit course, the total number of hours is 144 hours, based on no less than 48 hours per credit.

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.

See ERF D17-9 for course syllabi for Tables D17-1 and D17-2. The written guideline for the MS theses (PH 895) is included here.

From Table D17-1 Content Coverage for Academic Degree in a Public Health Field – MS in Biostatistics
PH 704 Principles and Methods of Epidemiology
PH 711 Intermediate Biostatistics
PH 801 Seminar in Public Health Research

From Table D17-2 Assessment of Competencies for MS in Biostatistics
PH 718 Data Management and Visualization in R
PH 813 Practice of Biostatistical Consulting
PH 895 Research and Thesis for MS in Biostatistics

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

Strengths

- Excellent course coverage of crucial applied biostatistical concepts
- Excellent course coverage on applying biostatistical methods in real-world public health contexts
- Variety of instructional venues that cover how biostatistics relates to other public health domains
- Course coverage for many foundational knowledge objectives that are not traditionally considered “biostatistical” training

Challenges

- One course, PH 801 Seminar in Public Health Research, covers the foundational knowledge objectives that are not specifically related to biostatistics

Plan

- Consider adding another course (as a selective) that could also address some of the foundational knowledge objectives covered by PH 801 to diversify the contexts in which students are exposed to these concepts

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.

1) **List the curricular requirements for each non-DrPH doctoral degree in the unit of accreditation, EXCLUDING requirements associated with the final research project. The list must indicate (using shading) each required curricular element that a) is designed expressly for doctoral, rather than master's, students or b) would not typically be associated with completion of a master's degree in the same area of study.**

   The school may present accompanying narrative to provide context and information that aids reviewers' understanding of the ways in which doctoral study is distinguished from master's-level study. This narrative is especially important for institutions that do not formally distinguish master's-level courses from doctoral-level courses.

   The school will present a separate list for each degree program and concentration as appropriate.

   The lists below present the curricular requirements for each of the Zilber School's four approved PhD programs. Recruitment for the PhD in Public Health – Concentration in Biostatistics is currently suspended, and two students are on track to complete the degree by May 2023.

   Each of the degree programs includes courses highlighted in gray below that distinguish them from the master's-level programs. All doctoral students take the four PhD core courses. In addition, each degree program has courses intended for doctoral students.

   <u>PhD in ENVIRONMENTAL HEALTH SCIENCES</u>
   The PhD in Environmental Health Sciences requires 65 credits beyond the Bachelor's degree. In addition to the PhD Common Core Coursework, credits include required concentration coursework (17 credits), "S"electives (at least 12 credits), and the remaining credits taken as research. "S"electives are divided into three categories: molecular, organismal, population.
   Required Core PhD Courses (12 credits)
   PH 704 Principles and Methods of Epidemiology, 3 credits
   PH 711 Intermediate Biostatistics, 3 credits
   PH 801 Seminar in Public Health Research, 3 credits
   PH 819 Social and Environmental Justice in Public Health, 3 credits

OR
PH 859 Racial/Ethnic Health Disparities in the United States, 3 credits
Required EHS Track Coursework (17 credits)
PH 705 Principles of Public Policy and Administration, 3 credits
PH 743 Environmental Risk Assessment, 3 credits
PH 750 Seminar in Environmental Health Sciences, 2 credits
PH 808 Writing a Federal Grant in the Public Health Sciences, 3 credits
PH 821 Advanced Survey of Environmental Health, 3 credits
PH 822 Molecular and Cellular Basis of Environmental Disease, 3 credits
Molecular Level "S" Electives
PH 775 Mechanisms of Infectious Disease, 2 credits
BIO SCI 529 Molecular Biology of Microorganisms, 3 credits
BIO SCI 540 Microbial Diversity and Physiology, 3credits
BIO SCI 564 Endocrinology, 3 credits
CHEM 601 Biochemistry: Protein Structure and Function, 3 credits
CHEM 602 Biochemistry: Cellular Processes, 3 credits
CHEM 604 Biochemistry: Metabolism, 3 credits
BMS 590 Topics in Clinical Laboratory Sciences: (Public Health Nutrition and Food Politics), 1-5 credits
BMS 615 Cellular and Molecular Toxicology, 3 credits
Organismal Level "S" Electives
PH 745 Developmental Toxicology, 3 credits
BIO SCI 401 Immunology, 3 credits
BIO SCI 556 Developmental Neurobiology, 4 credits
IND ENG 580 Ergonomics, 3 credits
IND ENG 780 Advanced Ergonomics – Low Back Pain, 3 credits
IND ENG 783 Advanced Ergonomics – Upper Extremity, 3 credits
Population Level "S" Electives
PH 721 Introduction to Translational Bioinformatics, 3 credits
PH 741 Environmental Public Health Microbiology, 3 credits
PH 762 Environmental Epidemiology, 3 credits
URBPLAN 662 Public Sector Influence on Real Estate Development, 3 credits
URBPLAN 771 Transportation Policy and Planning, 3 credits
URBPLAN 791 Introduction to Urban Geographic Information Systems for Planning, 3 credits
URBPLAN 792 Using Urban Geographic Information Systems (GIS) for Planning, 3 credits
URBPLAN 794 Internet Geographic Information Systems (GIS), 3 credits
GEOG 520 Physical Geography of the City, 3 credits
FRSHWTR 506 Environmental Health of Freshwater Ecosystems, 3 credits
IND ENG 786 Applied Biostatistics in Ergonomics, 3 credits
GEOG 880 Urban Sustainability, 3 credits
GEOG 945 The Internal Structure of the City, 3 credits
Additional Elective Courses (total "s"elective/elective credits must equal at least 12)
Research (credits must equal at least 24 credits to graduate)
PH 990 Research and Dissertation

PhD in EPIDEMIOLOGY
The PhD in Epidemiology requires a minimum of 75 credits of coursework beyond the bachelor's degree including:

- 24 credits to introduce principles of epidemiology, biostatistics, public health policy and community engagement.
- 6 credits of 's' elective coursework in subject matter areas.
- 6 credits of coursework in more advanced analytic methods.
- 3 credits of an elective in an area that aligns with research interests.
- 9 credits of advanced coursework in both theoretical and applied epidemiology.
- 6 credits in more advanced policy analysis and translation of epidemiologic findings to policy interventions.

- 12 credits of PhD-level coursework in research ethics, community-engagement, and a seminar in current issues in epidemiology.
- 9 credits toward dissertation writing and research.

Required Courses (60 credits)
PH 700 Structures of Inequality and Population Health, 3 credits
PH 702 Introduction to Biostatistics, 3 credits
PH 704 Principles and Methods of Epidemiology, 3 credits
PH 705 Principles of Public Health Policy and Administration, 3 credits
PH 758 Social Epidemiology, 3 credits
PH 759 Intro to Regression for Understanding the SDOH, 3 credits
PH 761 Epidemiology Field Methods, 3 credits
PH 763 Epidemiology for Equity, 3 credits
PH 779 Public Health Policymaking and Policy Analysis, 3 credits
PH 801 Seminar in Public Health Research, 3 credits
PH 804 Advanced Epidemiology, 3 credits
PH 819 Social and Environmental Justice in Public Health, 3 credits
PH 823 Applied Analysis of Binary Outcomes in Public Health Research, 3 credits
PH 864 Research Ethics in Epidemiology and Public Health, 3 credits
PH 870 Epidemiology in Health Policy and Advocacy, 3 credits
PH 904 Survey of Analytic Methods for Epidemiology, 3 credits
PH 960 Core Doctoral Seminar in Epidemiology, 3 credits
PH 990 Research and Dissertation, 9 credits
Epidemiology Subject Matter "S" electives (6 credits)
PH 768 Cancer Epidemiology, 3 credits
PH 769 Critical Perspectives on Nutritional Epidemiology and the Food System, 3 credits
PH 762 Environmental Epidemiology, 3 credits
PH 868 Epidemiologic Links Between Infectious and Chronic Disease, 3 credits
PH 865 Critical Methodologies for Health Equity Research, 3 credits
Analytics Methods "S" electives (6 credits)
PH 712 Probability and Statistical Inference, 3 credits
PH 714 Statistical Genetics and Genetic Epidemiology, 3 credits
PH 715 Applied Categorical Data, 3 credits
PH 716 Applied Survival Analysis, 3 credits
PH 717 Applied Longitudinal Data Analysis, 3 credits
PH 718 Data Management and Visualization in R, 3 credits
PH 776 Qualitative Approaches in Public Health Policy and Administration, 3 credits
SOCIOL 982 Advanced Quantitative Analysis, 3 credits
ED PSY 823 Structural Equation Modeling, 3 credits
ED PSY 832 Theory of Hierarchical Linear Modeling, 3 credits
PH 729 Survey Research Methods in Public Health, 3 credits
GEOG 525 Geographic Information Science, 3 credits
Other "S" electives (3 credits)
PH 727 Program Planning & Implementation in Public Health, 3 credits
PH 728 Program Evaluation in Public Health, 3 credits
PH 774 Violence and Health, 3 credits
PH 784 Social and Economic Policy as Health Policy, 3 credits
PH 808 Writing a Federal Grant in the Public Health Sciences, 3 credits
PH 820 Maternal and Child Health Foundations, Policy and Practice, 3 credits
PH 826 Principles of Community Intervention Research, 3 credits
PH 831 Community Engagement and Participatory Research Approaches in Public Health, 3 credits

PhD in Public Health – BIOSTATISTICS Concentration

Minimum degree requirement is 60 graduate credits beyond the bachelor's degree (plus an additional 9 credits dedicated toward dissertation writing and research), at least 35 of which must be earned in residence at UWM. The student, in consultation with the major professor, must create a plan of study and submit to the Biostatistics Faculty by the end of the first year. Minimum course requirements for all work requires approximately two to three full years of study.

Credits and Courses

Required Core Ph.D. Courses (12 credits)

PH 704 Principles and Methods of Epidemiology, 3 credits
PH 711 Intermediate Biostatistics, 3 credits
PH 801 Seminar in Public Health Research, 3 credits
PH 819 Social and Environmental Justice in Public Health, 3 credits

Required Methods Courses, 24 credits

MTHSTAT 761 Mathematics Statistics I, 3 credits
MTHSTAT 762 Mathematical Statistics II, 3 credits
PH 711 Intermediate Biostatistics, 3 credits
PH 718 Data Management and Visualization in R, 3 credits
PH 813 Practice of Biostatistical Consulting, 3 credits
PH 818 Statistical Computing, 3 credits
PH 911Generalized Linear Models, 3 credits
MATH 571 Introduction to Probability Models, 3 credits
OR
MATH 771 Theory of Probability, 3 credits
OR
MCW 04285 Introduction to Bayesian Analysis, 3 credits

Electives, at least 24 credits

PH 714 Statistical Genetics and Genetic Epidemiology, 3 credits
PH 715 Applied Categorical Data, 3 credits
PH 716 Applied Survival Analysis, 3 credits
PH 717 Applied Longitudinal Data Analysis, 3 credits
PH 720 Special Topics in Biostatistics, 1-3 credits
PH 721 Introduction to Translational Bioinformatics, 3 credits
PH 723 Design, Conduct and Analysis of Clinical Trials (TBD), 3 credits
PH 758 Social Epidemiology, 3 credits
PH 762 Environmental Epidemiology, 3 credits
PH 768 Cancer Epidemiology (TBD), 3 credits
PH 769 Critical Perspectives on Nutritional Epidemiology and the Food System (TBD), 3 credits
PH 8XX Statistical Learning TBD
PH 8XX Network Analysis TBD
PH 8XX Causal Inference TBD
COMPSCI 708 Scientific Computing, 3 credits
COMPSCI 711 Introduction to Machine Learning, 3 credits
BIO SCI 597 RNA Structure, Function, and Metabolism, 3 credits
BIO SCI 490 Molecular Genetics, 3 credits
MTHSTAT 564 Time Series Analysis, 3 credits
MTHSTAT 565 Nonparametric Statistics, 3 credits
MATH 768 Applied Stochastic Processes, 3 credits
MTHSTAT 863 Hypothesis Testing, 3 credits
MTHSTAT 869 Advanced Topics in Mathematical Statistics, 3 credits
PH 811 Causal Inference, 3 credits
PH 812 Statistical Learning & Data Mining, 3 credits

Doctoral Thesis, at least 9 credits

PH 990 Research and Dissertation, 1-8 credits repeatable

PhD in Public Health – COMMUNITY AND BEHAVIORAL HEALTH PROMOTION Concentration

A minimum of 72 credits of coursework beyond the bachelor's level must be completed to earn the degree, at least 32 of which must be earned in residence at UW-Milwaukee.

Courses

Required Core PhD Courses (12 credits)

PH 711: Intermediate Biostatistics 1, 3 credits
or
PH 759: Intro to Regression for Understanding the SDOH, 3 credits
or
SOC WRK 962: Applied Multiple Regression Analysis, 3 credits
PH 704: Principles and Methods of Epidemiology, 3 credits
PH 801: Seminar in Public Health Research, 3 credits
PH 819: Social and Environmental Justice in Public Health, 3 credits
or
PH 859: Racial/Ethnic Health Disparities in the United States, 3 credits

CBHP PhD Required Courses (36 credits)

PH 702: Introduction to Biostatistics, 3 credits
PH 725: Theories and Models of Health Behavior, 3 credits
PH 727: Program Planning & Implementation in Public Health, 3 credits
PH 728: Program Evaluation in Public Health, 3 credits
PH 729: Survey Research Methods in Public Health, 3 credits
PH 776: Qualitative Approaches in Public Health Policy and Administration, 3 credits
PH 820: Maternal and Child Health Foundations, Policy and Practice, 3 credits
PH 823: Applied Analysis of Binary Outcomes in Public Health Research 2, 3 credits
PH 826: Principles of Community Intervention Research, 3 credits
PH 827: Research Design in Community and Behavioral Health Promotion, 3 credits
PH 831: Community Engagement and Participatory Research Approaches in Public Health, 3 credits
PH 919: Core Seminar in Community and Behavioral Health Promotion, 3 credits

Required Advanced Quantitative Courses (3 credits)

PH 715: Applied Categorical Data, 3 credits
PH 716: Applied Survival Analysis, 3 credits
PH 717: Applied Longitudinal Data Analysis, 3 credits
SOCIOL 982: Advanced Quantitative Analysis, 3 credits
ED PSY 823: Structural Equation Modeling, 3 credits
ED PSY 826: Analysis of Cross-Classified Categorical Data, 3 credits

CBHP Elective Courses (9 credits)

ANTHRO 803: Survey of Cultural Anthropology, 3 credits
ANTHRO 744: Theories of Social Action: Understanding Agency & Social Structure, 3 credits
PH 752: Public Health and Mental Health, 3 credits
PH 758: Social Epidemiology, 3 credits
PH 768: Cancer Epidemiology, 3 credits
PH 769: Critical Perspectives on Nutritional Epidemiology and the Food System, 3 credits
HS 971: Seminar in Health Outcomes Assessment, 3credits
SOCIOL 910: The Sociology of Inequality, 3credits
SOCIOL 982: Advanced Quantitative Analysis, 3 credits
SOCIOL 715: Systematic Sociological Theory, 3 credits
GEOG 834: GIS and Society, 3 credits
GEOG 926: Advanced Geographic Information Science: Geographic Modeling, 3credits
SOC WRK 705: Individual Behavior and Social Welfare, 3 credits
KIN 732: Physical Activity and Health Across the Lifespan, 3 credits

Pre-Dissertation Research (3 credits)

PH 990: Research and Dissertation

Doctoral Thesis (9 credits)

PH 990: Research and Dissertation

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.**

Students in all four of the doctoral programs meet the 12 Foundational Knowledge Objectives through the PhD core curriculum comprised of four courses. Table D18-1 presents the courses and assessment for each Objective.

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum

Content	Course number(s) and name(s)	Assessment Opportunity
1. Explain public health history, philosophy and values	PH 704 Principles and Methods of Epidemiology	Lab activity #1: Students are asked to read article (Frohlich KL, Potvin L. The inequality paradox: the population approach and vulnerable populations. Am J Public Health 2008;98 (2):216–221. http://www.ajph.org/cgi/reprint/98/2/216) and summarize the population-based versus high-risk approach to disease prevention, discuss the advantages and disadvantages to each approach, compare and contrast these approaches with a vulnerable populations approach, and explain how this approach aligns with a healthy equity framework and can serve to ameliorate social inequities in health.
	PH 801 Seminar in Public Health Research	*Content*: covered in Week 2 *Assessment*: Ecological Framework 6-page paper: presentation on chosen public health condition - Week 5
2. Identify the core functions of public health and the 10 Essential Public Health Services	PH 801 Seminar in Public Health Research	*Content*: covered in Week 2, Syllabus, p. 6 *Assessment*: Ecological Framework 6-page paper: presentation on chosen public health condition - Week 5
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	PH 704 Principles and Methods of Epidemiology (QUANT)	Problem sets: students asked to calculate and explain appropriate usage of common measures of disease frequency used in epidemiology and public health; access and identify sources of public health data collected in U.S. and Wisconsin; calculate and interpret absolute and relative measures of comparison in health status between populations; identify study designs and estimate appropriate measures of association; assess and describe the impact of different types of bias on observed measures of association in

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum		
Content	**Course number(s) and name(s)**	**Assessment Opportunity**
		epidemiologic studies; and assess and describe confounding and effect modification in epidemiologic studies.
	PH 711 Intermediate Biostatistics (QUANT)	*Content*: Covered in first part of semester *Assessment*: Course project: A data analysis project with several specific scientific questions will be assigned to the student after the first mid-term exam in Week 6. The students are expected to select the appropriate analysis method to analyze national health-related survey data such as NHANES and BRFSS. For students who have research projects related to regression analysis, they could use their own health-related dataset for the project upon instructor's approval. Then the students shall write a data analysis report to address specific statistical questions such as evaluating the prevalence, trend, and risk factors of diseases among different populations using output from statistical software. Students are also required to describe limitations of statistical methods used in the project and discuss any advanced statistical methods that are beyond the content of PH711 but can improve model fitting. The report shall be written in a form that a non-statistician collaborator can understand. In the report, the student shall clearly write the method they use and the interpretation of their result. The peer review for classmates' projects will be part of each student's report.
	PH 759 Introduction to Regression for Understanding the SDOH (QUANT)	*Content*: Weeks 2-3; Readings: Westreich and Greenland (2012); Greenberg and Kleinbaum (1985); and Vittinghoff et al., Regression Methods in Biostatistics, Statistics for Biology and Health, Chapters #1-5. *Assessment*: Midterm Exams #1 and #2. Midterm Exam #1, Question 1: Briefly describe what an epidemiological study is and specify the goals for such study. Question #2: Examine the figure below and state which component cause would be a 'necessary' cause for disease causation and why. Explain how this

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum		
Content	**Course number(s) and name(s)**	**Assessment Opportunity**
		information could be used in disease prevention.
	PH 801 Seminar in Public Health Research (QUAL)	*Content*: covered in Week 3, Syllabus, p. 6 *Assessment*: Research design comparison 8-page paper - Week 8 AND Article critiques - Weeks 4-9, 11-13
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	PH 801 Seminar in Public Health Research	*Content*: covered in Week 2 (Syllabus: p. 6) *Assessment*: Ecological Framework 9-page paper: 2 parts - Weeks 2 & 4, including 8-page paper on chosen public health condition, including how it fits in with major causes and trends of morbidity and mortality in the US or in the relevant community; AND presentation - Week 5
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	PH 704 Principles and Methods of Epidemiology	*Content*: covered in Week 2 (Syllabus: p. 10) *Assessments*: Problem Sets 1&2 AND Midterm (Syllabus: pp. 4,6) Midterm covers lectures and assigned readings through class session 5 and problem sets 1-2 and assesses knowledge regarding epidemiologic theories of disease distribution and health equity frameworks, how and when to estimate measures of disease frequency, how to compare measures of disease frequency across populations, and use and evaluation of screening tools in public health
	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 3-5 (Syllabus: pp. 6-8) *Assessments*: Ecological Framework 6-page paper: 2 parts - Weeks 2 & 4, including 8-page paper on chosen public health condition, AND presentation - Week 5; Lit Review 20-page paper (Syllabus: p. 3): 4 parts on chosen topic with 5-8 research articles, including how the public health problem you have chosen can be addressed through primary, secondary, and tertiary prevention - Weeks 5-6, 11, 13, 15; AND presentation - Week 14
6. Explain the critical importance of evidence	PH 704 Principles and Methods of Epidemiology	Article critique of assigned research study - Lab 15; apply and interpret role

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum		
Content	**Course number(s) and name(s)**	**Assessment Opportunity**
in advancing public health knowledge		of bias, confounding, effect modification, criteria for causal inference, with strengths and limitations of research
	PH 759 Introduction to Regression for Understanding the SDOH	*Content*: Weeks 1-2 Readings: Rothman and Greenland (2005); Greenland and Brumback (2002); and Vittinghoff et al., Regression Methods in Biostatistics (2012), Chapters 1-5. *Assessment*: Problem Sets #1-4. Problem Set #1, Question 2: You are tasked with constructing a single directed acyclic graph (DAG) that describes the relationship between taking statins and risk of heart attack, as well as factors that may act as confounders of that relationship, mediate the relationship, or modify the effect of taking statins on the risk of heart attack. Problem Set #4, Question 30: Dr. Dookeran has just read a manuscript on 'work-related violence and use of psychotropics.' Table 2 provided below shows the main exposure (work-related violence) and additional covariates including gender, age, cohabitation status, education, and income. Dr. Dookeran has decided that the hazard ratio for gender can be interpreted in the same way as the hazard ratio for the main effect of work-related violence. State whether you agree or disagree with his interpretation of the hazard ratio for gender and briefly provide your rationale.
	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 3-5 *Assessment*: Research design comparison 8-page paper - Week 8 AND Article critiques - Weeks 4-9, 11-13
7. Explain effects of environmental factors on a population's health	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 1, 6-7 (guests) *Assessment*: Ecological Framework 6-page paper: 2 parts - Weeks 2 & 4, including 6-page paper on chosen condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
8. Explain biological and genetic factors that affect a population's health	PH759 Introduction to Regression for Understanding the SDOH	*Content*: Week 1 Readings: Braveman and Gottlieb (2014); and Marmot and Bell (2012).

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum		
Content	**Course number(s) and name(s)**	**Assessment Opportunity**
		Assessments: (1) Problem Sets #1 and #2. Problem Set #1, Question 2: You are tasked with constructing a single directed acyclic graph (DAG) that describes the relationship between taking statins and risk of heart attack, as well as factors that may act as confounders of that relationship, mediate the relationship, or modify the effect of taking statins on the risk of heart attack. You may use DAG examples from class or that you find online as models for constructing your DAG. Remember that you must use arrows to denote directionality. The list of elements in your DAG are as follows: 1. Exposure: taking statins; 2. Outcome: risk of heart attack; 3. Confounders of exposure and outcome: a. socioeconomic status (SES), b. age; 4. Mediator of the effect of taking statins on risk of heart attack: reduced cholesterol; 5. Modifier of the effect of taking statins: grapefruit in the diet (Note: we discussed in class that modifiers can be tricky to portray in a DAG but give it your best shot!). (2) Midterm Exam #1, Question 1: Summarize the main theme/s regarding social determinants of health from the manuscripts by Braveman & Gottlieb (2014) and Marmot & Bell (2012).
	PH 801 Seminar in Public Health Research	Content: covered in Week 1, 9 (guest) Assessment: Ecological Model 6-page paper: 2 parts for Weeks 2 & 4, including 6-page paper on chosen PH condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
9. Explain behavioral and psychological factors that affect a population's health	PH 801 Seminar in Public Health Research	*Content*: covered in Week 1, 11 (guest) *Assessment*: Ecological Model 6-page paper: 2 parts for Weeks 2 & 4, including 6-page paper on chosen PH condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
10. Explain the social, political and economic determinants of health and how they contribute	PH 704 Principles and Methods of Epidemiology	Lab Activities: include assessment of theories of disease distribution, comparison of disease frequency measures across populations,

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum		
Content	**Course number(s) and name(s)**	**Assessment Opportunity**
to population health and health inequities		interpretation of study findings in context of PH practice and policy; Group Project with presentation - Week 7: public health problem in Milwaukee, with background and data to document health inequity and recommended initiative to ameliorate problem.
	PH 801 Seminar in Public Health Research	*Content*: covered in Weeks 1, 7, 9, 11, 12 (guests) *Assessment*: Ecological Model 6-page Paper: 2 parts for Weeks 2 & 4, including 6-page paper on chosen PH condition; Lit Review 20-page paper: 4 parts on chosen topic with 5-8 research articles - Weeks 5-6, 12-13, 15
	PH 819 Social and Environmental Justice in Public Health	*Content: Weeks 1-5; Syllabus, pp. 9-10.* *Assessment*: Theory-driven Conceptual Framework: *(20% final grade, 100pts) DUE 11/23/20 @5PM* This assignment (5-7 pages + Figure) involves developing a theory-driven conceptual framework to inform research on a selected health inequity. You will select your health inequity topic by Week 5 (10/12/20), and submit a rough draft of your conceptual framework in week 9 (11/9/20).Your framework will be based on the theoretical/conceptual readings from this course and will answer in diagrammatic/pictorial form the question: *What does a public health researcher need to understand about the historical, structural (political and economic), social, and intermediate causes of the health inequity of interest to produce knowledge that advances health equity/achieves social and environmental justice?* The paper accompanying the framework will explain the theoretical/conceptual foundations for the framework, how you conceptualized the key constructs and causal processes depicted in your framework, and how the framework will inform health inequity research that addresses an environmental or social justice issue. A detailed assignment guide and rubric will be posted in Canvas for more details.

Table D18-1 Content Coverage for Academic Doctoral Degrees in Public Health – PhD Core Curriculum		
Content	**Course number(s) and name(s)**	**Assessment Opportunity**
	PH 859 Racial/Ethnic Health Disparities in the United States	Final Paper Option 1: An integrated conceptual review on a topic falling under the broad topic of health disparities, not necessarily racial/ethnic. "An ICR article should be designed to synthesize relevant literature, identify significant knowledge gaps, highlight potential synergies between disconnected lines of research, extend theoretical development, and propose new directions for research." Option 2: A short research prospectus, which includes a Specific Aims page, a literature review, and a brief sketch of the analytical strategy. This reflects components of an NIH proposal.
11. Explain how globalization affects global burdens of disease	PH 801 Seminar in Public Health Research	*Content:* Weeks 3-6, Syllabus, pp. 6-8 *Assessment*: Reflection paper #1 on globalization - Week 6
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health)	PH 801 Seminar in Public Health Research	*Content*: Weeks 3-7, Syllabus, pp. 6-9 *Assessment*: Reflection paper #2 on ecological perspective about connections among human, animal and ecosystem health - Week 7

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.

Four tables are presented below for each of the school's doctoral degrees. The table footnotes highlight a particular aspect about that degree. For three of the tracks (EHS, EPI, and CBHP), the changes relate to the curriculum and competencies in response to CEPH comments on the Preliminary Self-Study.

Table D18-2.1 Assessment of Competencies for PhD in Environmental Health Sciences		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1. Apply public health science theories, principles, and methods when developing and implementing public health programs and research.	PH 801 Seminar in Public Health Research	*Content*: Integrative Literature Review (using paradigms/theories); pp. 3-4 in syllabus *Assessment*: literature review consists of several smaller assignments leading to final 20-

Table D18-2.1 Assessment of Competencies for PhD in Environmental Health Sciences		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		page paper and further develop your knowledge of your area of research. Paper has 4 parts and culminates with presentation
	PH 990 Research and Dissertation	Doctoral research proposal and dissertation.
2. Correlate issues of population diversity and social justice with principles of environmental and occupational health.	PH 819 Social and Environmental Justice in Public Health	Weekly discussion board posts (based on readings) and class participation (graded) assess this. While modules may shift each semester, in 2020, at a minimum, Modules 2, 6, and 8 addressed intersection between social and environmental justice and health.
	PH 821 Advanced Survey of Environmental Health	Silent Snow paper and Wisconsin Environment Tracking Project assignment both involve the integration of social justice with environmental health.
3. Describe the major environmental and occupational agents and their effects on human populations and the environment.	PH 745* Developmental Toxicology	Exam assesses knowledge of metals, nicotine, endocrine disrupting chemicals, Thalidomide research paper
	PH 750 Seminar in Environmental Health Sciences	Writing assignments address rotating current topics in environmental health
	PH 821 Advanced Survey of Environmental Health	Weekly writing assignments and final exam assess knowledge of lead and other toxic metals, water contaminants, climate change, air pollution, and other topics
4. Describe genetic, physiologic, and environmental factors that affect susceptibility to adverse health outcomes following exposure to common hazards.	PH 743 Environmental Risk Assessment	Take-home problem set covers uncertainty factors in adjusting to susceptibility factors
	PH 745* Developmental Toxicology	Exam covers genetic factors leading to susceptibility
	PH 821 Advanced Survey of Environmental Health	Wisconsin Env Tracking Project and class paper include susceptibility
5. Explain current environmental risk assessment methods.	PH 743 Environmental Risk Assessment	All assignments assess knowledge of risk assessment (entire course is about risk assessment)
6. Describe approaches for detecting, preventing, and controlling environmental		Exam assesses knowledge of quantifying/detecting microbes in the environment, and knowledge of

Table D18-2.1 Assessment of Competencies for PhD in Environmental Health Sciences		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
hazards that pose risks to human health and safety.		waste-water treatment to reduce harms to health
	PH 743 Environmental Risk Assessment	Take-home problem sets assess knowledge of biomonitoring, exposure assessment, PBPK modeling
7. Identify the general mechanisms and/or modes of action of agents in creating an adverse response to environmental exposures via various routes and doses.	PH 745* Developmental Toxicology	Exam and student oral presentation cover toxicological models of actions of common environmental agents and student's topic of choice
	PH 990 Research and Dissertation	Proposal and final written dissertation incorporate concepts of disease mechanism in planning and disseminating the research
8. Develop an original hypothesis and design research studies to test it, and then conduct appropriate research and results synthesis to produce a definitive result.	PH 808 Writing a Federal Grant in the Public Health Sciences	Major semester assignment of developing, writing and NIH F31 grant proposal.
	PH 990 Research and Dissertation	Developing, conducting, and writing dissertation research.
9. Demonstrate acceptable skills in scientific writing and oral presentation, to both scientific audiences and the general public.	PH 745* Developmental Toxicology	Includes a formal oral presentation on a topic of interest.
	PH 808 Writing a Federal Grant in the Public Health Sciences (WRITING - SCIENTIFIC)	Major semester assignment of developing and writing and NIH F31 grant proposal.
	PH 821 Advanced Survey of Environmental Health (WRITING – GENERAL PUBLIC)	Article Critiques (4); Syllabus, pp. 3-6. Critiques written in the style of a *NY Times* science news story or scientific review of journal article. Among items to be included in this framework are: 1) What is the potential public health concern? 2) What can the public do to protect themselves from this problem? 3) What are the major findings of the research demonstrating it to be an issue? 4) How was the research performed? 5) What future questions or research might be stimulated by this research? Critique should follow the inverted journalistic style format.

Table D18-2.1 Assessment of Competencies for PhD in Environmental Health Sciences		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		See ERF D18.9 for assignment description.
	PH 990 Research and Dissertation (WRITING -- SCIENTIFIC) (ORAL COMMUNICATION – GENERAL PUBLIC)	Developing, conducting, and writing dissertation research and doing a public oral presentation of the dissertation. Communication skills to the general public are honed in PH 990. As part of their dissertation defense, students give a 45-to-50-minute presentation, which is actually open to the public. The first 15 to 25 minutes of this presentation are geared toward communicating the "big picture-public health relevance" of their dissertation research. The remaining portion of this presentation then delves into the more discipline specific aspects of their project.
10. Demonstrate knowledge of relevant literature for a selected area of study including identification of knowledge gaps.	PH 745* Developmental Toxicology	Semester-long paper on a topic of their choice which involves mastery of an area of literature to write the paper
	PH 808 Writing a Federal Grant in the Public Health Sciences	NIH F31 grant-writing assignment requires mastering literature and identifying a gap
	PH 990 Research and Dissertation	Dissertation includes the design of a research proposal which includes substantial literature review and identifying a gap

*****EHS doctoral students have been taking PH 745 Developmental Toxicology instead of PH 822 Molecular and Cellular Basis of Environmental Disease, which has not been offered in several years. To formalize this requirement, GPC approved the Program Change Form on 12/21/21, and the Faculty Council approved this form on 12/22/21. The PH 745 course will show in the EHS Concentration Requirements list in the campus Catalog this summer following the CIM AY 2022-23 update.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1. Integrate knowledge regarding biological, behavioral, cultural, and sociopolitical mechanisms within historical contexts operating at multiple levels of causation to shape hypotheses regarding population health and health equity.	PH 758 Social Epidemiology	Midterm exam: Students submit a 6-8 page, double-spaced short-answer response paper based on selected social epidemiologic article(s). This assignment allows students to demonstrate their ability to explain a conceptual model as it relates to epidemiologic theories that shaped the authors' hypotheses, research questions and analytic methods; compare and contrast social versus biological explanations for the health inequity being studied; and describe the methodological considerations relevant to examining mediation. See syllabus for assignment description.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 819 Social and Environmental Justice	Theory-Driven Conceptual Framework Paper: This assignment (5-7 pages + Figure) involves developing a theory-driven conceptual framework to inform research on a selected health inequity. The framework is based on the theoretical/ conceptual readings from this course and answers in diagrammatic/pictorial form the question: *What does a public health researcher need to understand about the historical, structural, social, and intermediate causes of the health inequity of interest to produce knowledge that advances health equity/achieves social and environmental justice?* The paper accompanying the framework explains the theoretical/ conceptual foundations for the framework, how the student conceptualized the key constructs and hypothesized causal processes depicted in the framework, and how the framework will inform health inequity research that addresses an environmental or social justice issue. See syllabus for assignment description.
2. Critically evaluate epidemiologic theories of disease distribution and epidemiologic frameworks of causation.	PH 758 Social Epidemiology	Midterm and final exams: Students submit 6-8 page, double-spaced short-answer responses based on selected social epidemiologic article(s). These exams allow students to demonstrate their ability to critically evaluate a range of epidemiologic theories of disease distribution that shaped the authors' hypotheses, research questions, and analytic methods. See syllabus for exam descriptions.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 804 Advanced Epidemiology	The course Final Exam provides the student the opportunity to display mastery of topics covered in this course. Students integrate knowledge of epidemiologic frameworks of causation and epidemiological concepts, principles, and applied methods into a well-reasoned, clearly communicated response covering the design, analysis and interpretation of epidemiologic studies or problems. The final exam is written in the same style that Epidemiology PhD students can expect to encounter on the competency exam. See syllabus for assignment description.
3. Apply theories across multiple disciplines to frame and interpret epidemiologic research with attention to relevant policy and practice implications.	PH 700 Structures of Inequality and Population Health	In the 9–12-page final paper, students conduct a theory-grounded and evidence-informed structural analysis that explains how a specific health inequity has arisen and persists. For theory, they are required to explain key tenets and assumptions of a critical social theory and public health theory/framework that address structural determinants of health and then apply those theories/frameworks to analyze the structural and intermediary determinants of their health inequity of interest (based on epidemiologic, public health, and social science literature). They also advocate for effective policy approach(es) —using public health, social justice, and critical social theories and evidence—that will both diminish structural inequities (e.g., race or sexuality/gender hierarchies) and their chosen health inequity. See syllabus for assignment description.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 758 Social Epidemiology	Midterm exam: Students submit a 6-8 page, double-spaced short-answer response paper based on selected social epidemiologic article(s). This assignment allows students to demonstrate their ability to explain a conceptual model as it relates to epidemiologic theories that shaped the authors hypotheses, research questions and analytic methods; compare and contrast social versus biological explanations for the health inequity being studied; and describe the methodological considerations relevant to examining mediation. See syllabus for assignment description.
4. Critically appraise the scientific literature to identify strengths and limitations of existing methodological approaches in the field of Epidemiology.	PH 758 Social Epidemiology	In the **final assignment**, students submit a 6-8 page, double-spaced short-answer response paper based on selected social epidemiologic article(s). This assignment allows students to demonstrate their ability to describe the methodological considerations relevant to examining the intersections between socioeconomic position, gender, and/or race in influencing health inequities. In **weekly graded discussion questions** based on empirical epidemiologic articles, students answer specific questions that demonstrate their ability to interpret and contextualize results, explain strengths and limitations of study design and analytic approach, and describe the policy and practice implications of study findings. See syllabus for assignment descriptions.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 904 Survey of Analytic Methods for Epidemiology	Written Submissions and In-Class Participation (Graded) - Weeks 2-14. See supplemental file for assignment description. Students must read and study all assigned epidemiology methods articles. The readings are long and dense; students also draw on what they learned in PH 804. For each week, students write a structured essay of no more than 4 pages and 2000 words in which they provide responses for all of the assigned questions. Methodological approaches covered include agent-based models, assessing interaction, multilevel modelling, instrument variables, missing data, mediation analysis, propensity scores, and gene environment interactions. See assignment description in supplemental file.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
5. Design and conduct independent, interdisciplinary epidemiologic research using appropriate qualitative and/or quantitative methods demonstrating knowledge of theory, study design, sources of bias and other limitations to causal inference.	PH 804 Advanced Epidemiology	For the final project assignment, students design and conduct an independent analysis of epidemiologic data. Students identify a gap in knowledge and formulate a testable research question/hypothesis based on critical scientific review of contemporary public health literature of their interest. Students identify a relevant dataset to examine their research question(s) and utilize analytic methods and theory they have learned in class. Students conduct an analysis and interpret, present, and discuss model results in a logical manner. Students construct an IRB approved research protocol; present, interpret, and discuss their results in class; and write a journal type manuscript to be submitted for peer-review and publication. Deliverables for the final project include a 15-minute presentation with five minutes for questions and a manuscript (for most journals this will be about 2500 words with no more than 5 tables/figures). See syllabus for assignment description.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PhD Dissertation	The dissertation is the culminating experience for the PhD in Epidemiology. Students who have achieved dissertator status develop, in consultation with their primary faculty advisor, a dissertation research plan including an abstract, background, outline of specific aims and hypotheses, preliminary findings (if applicable), research methods proposed, public health significance of the proposed research and references, to be reviewed and formally approved by the dissertation advisory committee. The PhD dissertation must clearly outline the student's obligation for completing an original piece of work of sufficient quality, as determined by the committee. The review and approval process for the dissertation research plan includes a formal presentation to the committee. Once the approved dissertation research and write-up has been completed, the candidate submits the original work to the committee for review. The candidate must orally defend the dissertation in a publicly announced presentation that is open to the academic community. See graduate student handbook for description of dissertation requirements.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
6. Explain the principles and methods of conducting community-engaged epidemiologic research to promote population health and health equity.	PH 763 Epidemiology in Action for Equity	**Pre-class Discussion board posts** for modules 4 5, 6, and 10-14. For each post, students explain and discuss different aspects of participatory action research (PAR) and community-based participatory research (CBPR) and their applicability to epidemiologic research and practice. The instructor provides prompts for each module to guide discussion. Module 4 covers foundations of PAR and CBPR. Module 5 covers participation, trust, and facilitation in participatory approaches to research. Module 6 covers community mobilization in environmental epidemiologic research. Module 10 delves into ethical dilemmas and aspects of PAR/CBPR. Module 11 addresses how community is defined in PAR/CBPR and discusses power relations among partners in PAR/CBPR. Module 12 discusses how to conduct participatory collection and analysis of quantitative data. Module 13 discusses issues in dissemination of data in PAR/CBPR projects and how it can be used to advance health equity via community mobilization. Module 14 addresses PAR outcomes and interventions for social justice. See syllabus for general description of assignment and for course schedule of topics.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PhD Preliminary Exam	Epidemiology doctoral students must pass a PhD Preliminary Examination before advancement to PhD candidacy (i.e., dissertator status). The exam consists of a single take-home exam in which students provide written answers (about 20-25 double-spaced pages) to a series of questions in reference to select epidemiologic research articles. Students are given one week (typically Monday to Monday) to complete the exam. The Doctoral Preliminary Examination Committee selects the research articles and creates the exam. The questions assess several PhD program competencies and requires students to integrate content related to 1) epidemiologic concepts and methods, 2) data analysis methods and applications to epidemiologic research, **3) applications of theory, social and environmental justice, health equity, and community engagement to epidemiologic research**, and 4) policy implications of epidemiologic research. The preliminary exam for the past three years has included a question that specifically assesses students' ability to discuss and apply key methods and assumptions, principles, and/or features of i) participatory action research (PAR) and ii) ethical community engagement for achieving population health and health equity. See graduate student handbook for description of preliminary exam.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
7. Develop self-reflexive and other skills for justice-oriented, ethical epidemiologic research and practice.	PH 763 Epidemiology in Action for Equity	In the **Community Listening and Self-Reflection assignment**, students identify a relevant community event where they can learn more about their community of focus through observation and **listening**. Through participant observation of the event, students identify needs, concerns, strengths, resources, and perspectives of people in select communities that experience social marginalization, and they **practice principles of cultural humility/safety, self-reflexivity, and standpoint epistemology.** Students practice self-reflexivity via **weekly Self-Reflection Journal Entries** (300-350 words). A crucial concept in community based participatory research is self-reflection on the part of the researcher. **Self-reflection journal entries** can be in relation to any aspect of the course such as course readings, in-class discussions, the student's community of focus, their experience doing peer facilitation, and/or group work. The class will generate a list of self-reflection questions in week 2, and then update these during week 10. Each week, students select one Self-Reflection Journal question to guide the journal entry.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 819 Social and Environmental Justice	Weekly Critical Thinking Prompt Pre-Class Discussion Board Post & Participation in Class Discussion & Activities. Multiple critical thinking prompts are provided to facilitate students' critical engagement with the readings for each week. In their discussion board posts, students compile answers to the prompts, along with any other thoughts for discussion. Modules 4 and 8-14 focus on multidisciplinary approaches to **ethical** community engaged research and knowledge production that 1) apply social and environmental justice philosophies, theories, and frameworks to public health research and practice; and 2) **construct collaborative and multi-disciplinary approaches that facilitate community-engaged, justice oriented public health research.** See syllabus for general description of assignment and for course schedule of topics.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 804 Advanced Epidemiology	**Academic audience**: For the final project assignment, students design and conduct an independent analysis of epidemiologic data. Students identify a gap in knowledge and formulate a testable research question/hypothesis based on critical scientific review of contemporary public health literature of their interest. Students identify a relevant dataset to examine their research question(s) and utilize analytic methods and theory they have learned in class. Students conduct an analysis and interpret, present, and discuss model results in a logical manner. *Students construct an IRB approved research protocol; present, interpret, and discuss their results in class; and write a journal type manuscript to be submitted for peer-review and publication*. Deliverables for the final project include a 15-minute presentation with five minutes for questions and a manuscript (for most journals this will be about 2500 words with no more than 5 tables/figures). See syllabus for assignment description.

Table D18-2.2 Assessment of Competencies for PhD in Epidemiology*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
9. Translate epidemiologic findings into policy recommendations and advocacy strategies that promote population health and health equity.	PH 758 Social Epidemiology	In weekly graded discussion questions based on empirical epidemiologic articles, students answer specific questions that demonstrate their ability to interpret and contextualize results, explain strengths and limitations of study design and analytic approach, and describe the policy and practice implications of study findings. For example, week 2 addresses Social Policies as Determinants of Health and discussion questions focus on methodologic issues in assessing effects of policies on health inequalities. See syllabus for general assignment description and discussion 2 assignment description in supplemental file.
	PH 779 Public Health Policymaking and Policy Analysis	Write a policy analysis. In 14-16 double spaced pages, students conduct a policy analysis for an imagined client of their choice. The policy analysis paper defines the public health problem selected, identifies four policy options (one of which must be the status quo) and criteria for comparing them (all papers must include at least Equity, Efficiency, and Feasibility), contrasts and compares the options, and makes an evidence-informed policy recommendation. While not required to perform independent quantitative data analysis, students have that option. In the absence of a data analysis, students must draw on data analysis available in prior literature to justify their policy recommendations. See syllabus for assignment description.

*****In response to reviewers' comments on the Preliminary Self-Study, Epi Track faculty clarified wording in Competency #2, revised Competency #7, and deleted Competency 8, with accompanying edits in the corresponding assessments.

Table D18-2.3 Assessment of Competencies for PhD in Public Health – Biostatistics Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1. Develop new statistical methodologies to solve problems in biomedical, clinical, public health, or other fields.	PH 990 Research and Dissertation	The major product of the dissertation will be the development of a new statistical methodology relevant to any area of public health. The dissertation committee and chair will assess whether the research presented in the dissertation meets this competency.
2. Contribute to the body of knowledge in the field of biostatistics by writing and successfully submitting manuscripts for publication in a peer-reviewed journal.	PH 990 Research and Dissertation	It is expected that at least one chapter from the dissertation will be submitted as a manuscript for publication in a peer-review journal.
3. Perform all responsibilities of a statistician in collaborative research; in particular: design studies, manage and analyze data and interpret findings from a variety of biomedical, clinical or public health experimental and observational studies.	PH 813 Practice of Biostatistical Consulting	See Project #1-#5; Syllabus: pp. 5. For each consultation project, students receive a data set for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection
4. Communicate statistical information effectively with individuals with varying degrees of statistical knowledge through written and oral presentations.	PH 813 Practice of Biostatistical Consulting	Project #1-#5; Syllabus: pp. 5. For each consultation project, a students receive a data set for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
	PH 990 Research and Dissertation	The dissertation defense is intended for a broad audience as well as the dissertation committee.

Table D18-2.3 Assessment of Competencies for PhD in Public Health – Biostatistics Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
5. Use statistical, bioinformatics and other computing software to organize, analyze, and visualize data	PH 718 Data Management and Visualization in R	In PH718, the final project tests each component of this competency. Students use the statistical software R to complete a project including paper and presentation. Students clean data set and conduct analyses to predict all-cause mortality for a set specified variables. See ERF D18.9 for specific description of the final project.
	PH 813 Practice of Biostatistical Consulting	Project #1-#5; Syllabus: pp. 5. For each consultation project, students receive a data set for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques to understand the correlation or test related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
	Preliminary Exam	The applied portion of the qualifying exam is intended to test the student's ability to analyze, visualize, and organize data using statistical and bioinformatics software.
6. Review and critique statistical methods and interpretation of results in published research studies, presentations, or reports.	PH 990 Research and Dissertation	The literature review component of the dissertation must satisfy this competency.
7. Demonstrate solid theoretical knowledge necessary for the development and study of new statistical methods.	Preliminary Exam	Each question on the Theoretical Exam is intended to test the students grasp of the theoretical statistics. See ERF D18.9 for specific exam questions.
8. Understand and implement modern statistical approaches emerging in the literature to improve biomedical and public health.	PH 813 Practice of Biostatistical Consulting	Project #1-#5; Syllabus: pp. 5. For each consultation project, a data set is given to student for data analysis. Students are asked to address specific clinical or public health questions by using appropriate statistical techniques

Table D18-2.3 Assessment of Competencies for PhD in Public Health – Biostatistics Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		to understand the correlation or test related hypotheses. Students are asked to point out any limitations from their data analysis and propose any modification for future study design or data collection.
	PH 990 Research and Dissertation	The dissertation includes a significant data analysis component that will utilize modern statistical techniques.

*Admissions to the PhD in Public Health – Biostatistics Concentration have been suspended. Two students are progressing through the program, and they are expected to defend their dissertations in May 2023.

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
1. Describe and critically evaluate the utility of key social and behavioral science theories for public health research.	PH 725 Theories and Models of Health Behavior	THEORY APPLICATION PAPER: Students will conduct an in-depth examination of the application of a theory/model to a public health topic of their choice. This process will enhance understanding of both foundational concepts of the theory and its application. The process will also provide an opportunity for critical thinking about the theory's utility and for practice writing an academic paper.
	PH 819 Social and Environmental Justice	Theory-Driven Conceptual Framework Paper: This assignment (5-7 pages + Figure) involves developing a theory-driven conceptual framework to inform research on a selected health inequity. You will select your health inequity topic by Week 5 (10/12/20), and submit a rough draft of your conceptual framework in week 9 (11/9/20).Your framework will be based on the theoretical/conceptual readings from this course and will answer in diagrammatic/pictorial form the question: What does a public health researcher need to understand about the historical, structural, social, and intermediate causes of the health inequity of interest to produce knowledge that advances health equity/achieves social and environmental justice? The paper accompanying the framework will explain the theoretical/ conceptual foundations for the framework, how you conceptualized the key constructs and causal processes depicted in your framework, and how the

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		framework will inform health inequity research that addresses an environmental or social justice issue.
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	The course critiques some of the traditional theories from a community engagement and participatory research perspective. It also seeks to critically evaluate how traditional social and behavioral theories are incorporated in community engaged research and how they can be adapted and enhanced. In addition to incorporating theoretical frameworks in their group project, students also write two community engaged/participatory article critiques in which they examine how theory is used, and how it could be enhanced. The course also introduces students to additional theoretical frameworks including Decolonizing theory, liberation theory, and critical race theory. *Assessment*: Students write two short reflection papers, providing a critique of the assigned course material. Paper 1 is critical reflections on week 1-3 readings. Paper must include pros & cons of CBPR, whether CBPR is a paradigm shift from traditional research, how CBPR can better address and promote health equity, and must include critical reflections on the readings including how decolonizing theory and critical race theory tie into CBPR? and how can CBPR approach and theories better address and promote health equity?
	PH 919 Core Seminar in CBHP	Theory Assignment. Describe a theory that is interesting to you and how it is relevant to your research interests There are lots of theories out there that might be more relevant to your work than the Health Beliefs Model or the Transtheoretical Model or the Social Ecological Model. Do your best to find a theory that is not one of the same old theories that get used again and again in PH research. After you find a theory that appeals to you, write a 500 to 700-word essay (a) explaining the theory and how it developed and (b) how it relates to your primary research interests/questions and (c) give an example of how you might use the theory in your research. If you get desperate, you can use one of those oldie but goodie theories you learned about in 725, but you must not immediately settle for what is familiar. Explore your options.
	Preliminary Exam	The take-home portion of the Preliminary Exam is to write an integrative review on a selected public health problem or issue, requiring clear theory-based conceptualization of the problem/issue. The in-class exam also requires theory application.

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
2. Design and implement theory driven community and behavioral health promotion research	PH 827 Research Design in Community and Behavioral Health Promotion	Grant proposal assignment
	PH 919: Core Seminar in CBHP	Research specific aims assignment
	PH 990 Dissertation Research	Design, complete and successfully defend a theory driven research dissertation. Students prepare a dissertation proposal (significance of problem, significance of research, aims/research questions, methods), which they present to their dissertation committee for approval. Working with their major professors, students undertake their research and submit the full manuscript to the dissertation committee for review. Students must present the dissertation in a public event that is open to the school community.
3. Apply social and environmental justice philosophies, theories, and frameworks to public health research and the interpretation of research findings	PH 819 Social and Environmental Justice	Final Paper: Continuing to focus on the same health inequity students addressed in their conceptual framework, they conduct a scoping literature search to identify original research articles (qualitative and/or quantitative) that address their health inequity of interest. Students then purposively sample 8-10 articles from their results to represent the extant original research on their chosen health inequity. The paper will then concisely summarize the search strategy, briefly justifies selected articles, and provides an in-depth critical analysis of the strengths, limitations, and knowledge gaps present in the public health/medical/social science literature in the area of interest (based on the 8-10 articles). The paper draws on student's conceptual framework to guide the analysis. Draw upon course readings on health equity, community based/engaged research, measurement, ethics, and/or theory to discuss future directions for health inequity research that furthers an agenda of environmental and social justice. The paper concludes with recommendations for integrating critical theory and methodologies into future research on health inequities in topic area.

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	PH 831 devotes the first three sessions to examining historical and theoretical work that has led to development of CBPR. Students write critical reflections papers and use their readings and discussions to critique traditional research and it impact on health equity. Individual critical reflections paper #1 covers week 1-3 readings (Historical and theoretical influences). The paper must include pros & cons of CBPR, whether and how CBPR is a paradigm shift from traditional research, how CBPR can better address and promote health equity, and must include critical reflections on the readings.
4. Describe the social-political-historical contexts that have shaped the development of community engaged research including community based participatory approaches	PH 819 Social and Environmental Justice	Weekly Critical Thinking Prompt Pre-Class Discussion Board Post & Participation in Class Discussion & Activities [Weeks 10-14 readings and assignments focus on community based participatory action research]
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	*Content*: Course devotes the first three sessions to examining historical and theoretical work that has led to development of CBPR. Week 5 focuses on the historical and contemporary distribution of power and privilege in research and the role of CBPR in balancing power and privilege. Students write critical reflections papers and use their readings and discussions to critical traditional research and its impact on health equity. *Assessment*: Individual critical reflections papers cover week 1-3 readings (Historical and theoretical influences). The paper must include pros & cons of CBPR, whether and how CBPR is a paradigm shift from traditional research, how CBPR can better address and promote health equity and power balance and must include critical reflections on the readings particularly contributions of Paulo Freire's work and the northern and southern research traditions. Week 5 assessment included a critical reflection paper on power and privilege in community engaged research. Reflection piece includes historical use and critique of power/privilege and how CBPR approaches address these issues.
5. Describe the contributions of community engaged approaches to community and behavioral health	PH 826 Principles of Community Intervention Research	Select an Article/Lead a Discussion (Weeks 3, 5, 10; 3 x 10% = 30%). Students take a leadership role in three classes on community intervention studies. These assignments are designed to (1) help them analyze and think critically about the readings (2) master the structure and style of scientific thinking/writing and (3) facilitate group discussion. Students select (a) a specific community intervention study (one classic and one more recent) and one

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
research and interventions		community-based intervention (that relates to your research interests). Their presentations cover the following: (1) what was the primary public health target; why was this target picked? (2) What is the "theory "of intervention used/applied? (3) What methods were used; how do the methods selected link back to the purpose of the study and/or theory? (4) What were the primary findings and conclusions? (5) Primary strength and weakness of the approach taken.
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	*Content*: This is the main goal of the course, and the contributions of community engaged approaches are integrated in the entire course including readings and class discussions. Student are assigned a weekly session to lead, write self-reflection on course material, and conduct article critiques, and group project to apply what they learn. They review the assigned material, facilitate class discussion on how the material fits with community engaged research and practices and what can be done to enhance community engaged research and practice. *Assessments*: Students will complete brief reflections on course reading and two critique papers 1 and 2 that focus on critique of traditional research methods and the contributions of CEnPR, including CBPR principles in research and practice. Class discussions reinforce concepts and CEnPR contributions by allowing students to discuss and debate merits of CBPR in different forms of research and practice situations. The final paper includes examining a public health issue using a critical CBPR lens. Student critique the articles they identified on the topic using covered theoretical approaches and CBPR principles with particular attention to power/privilege balance. Students (particularly doctoral students) are usually encouraged to develop a community engaged or participatory research proposal for their final term paper.
6. Critically appraise different methodological strategies in developing and implementing community engaged research	PH 826 Principles of Community Intervention Research	Measurement Article Selection, Review and Presentation (10%) Select a journal article about a measure relevant to your research interests and community-based intervention. The measure must be new to you and not something that you have used before in your work or in a previous class assignment. The article must be explicitly about the validity of the measure and not an article describing a larger study that includes the measure. Write a summary of the measure, including: **(1)** A description of the measure including information about its validity, reliability, etc. **(2)** The reason that the measure is interesting and

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		could be useful to you in your future activities as a researcher**; (3)** What you like about it and how it could be improved. Post your summary paper, the article about the measure summarized and the measure itself (if available) in drop-box
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	Assignment 1 (Reflection Paper 1): Individual critical reflections on week 1-3 readings. This paper aims at helping students compare and contrast traditional research methodologies and theoretical framework with CBPR approach. The paper must include a) a critical examination of the pros & cons of CBPR and b) whether and what makes CBPR a paradigm shift from traditional research, c) In what ways does decolonizing theory and critical race theory tie into CBPR? and d) How can this approach better address and promote health equity? (3-4 pages maximum, double spaced)
7. Apply qualitative and advanced quantitative methods to the study of public health problems, the assessment of community strengths and the evaluation of prevention and intervention programs.	PH 727 Program Planning and Implementation in Public Health	Final Project: Intervention Research Project Proposal
	PH 728 Program Evaluation in Public Health	7-page program evaluation proposal
	PH 776 Qualitative Approaches in Public Health Policy and Administration	Qualitative Proposal Project (initial proposal, interview guide + consent, completion of interview and transcript, coding of transcript, one additional data collection method, full proposal informed by pilot data collected during the semester)
	PH 823 Applied Analysis of Binary Outcomes in Public Health Research	All course assignments support this goal. This course involves a multi-part assignment of coming up with a question, using a real existing, public use dataset to answer the questions, including several detailed assignments that walk through the steps of a statistical analysis and interpretation, and writing up conclusions in an abstract format suitable for conference submission.
	PH 826 Principles of Community Intervention Research	Final Exam is a replica of the "in class" prelim exam: Students will be asked to critically evaluate and/or propose a solution to a case study problem. Students are expected to demonstrate their skills in "translational" scholarship, defined as the capacity to integrate public health research and practice, through their analysis of the problem and their capacity to propose creative and practical solution(s). The case study and a series of questions will be provided to the student when they arrive for the exam.

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	The group project requires student to incorporate at least one qualitative method, usually photovoice (which is covered in week 10). The last part of the course (weeks 8-15) is devoted to methodological issues in community engaged and participatory research, with week 13 devoted to balancing quantitative, qualitative and mixed methods in community research. Assessment of understanding of these methods is done throughout the two assigned article critiques, their inclusion in group project and critique in the final papers.
	Preliminary Exam	The in-class portion of the Preliminary Exam is to respond to a scenario and set of theory and methodological questions related to a public health problem. Students are asked to address the methodological challenges of community-based intervention research.

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
8. Use research findings to advocate for policies, programs, and resources that improve the health of communities.	PH 831 Community Engagement and Participatory Research Approaches in Public Health	Group Semester Project for both MPH and PhD Students: (30%) Throughout the semester, students will work in small, assigned groups of 3-5 students (number of groups and group size will depend overall class enrollment) on designing a CEnPR community project aimed at fostering the social and environmental justice mission of the Zilber School of Public Health in the immediate Milwaukee community. Goal: to design a student-led CEnPR project targeting one or two related health disparities issues (can include underlying social determinants of health). The project seeks to present strategies, program or advocate for changes in the selected health issue with a focus on eliminating health inequality. Note: Topics will be assigned by instructor and discussed in class. This is a semester long project and may require contact with external agencies outside of class time. Students present their final group project as a TED presentation at the end of the semester. The TED talk is targeted at academic policy makers, and community stakeholders. The group presentation is assessed for succinctness, clarity, and completeness with a major focus on how the course content and knowledge of CEnPR are applied to the project. The group project is graded individually and includes each student's assessment of themselves and each group member's contribution to the project including the final group TED format presentation. Final grade may be same for all group members or vary depending on students' contribution and final presentations.
9. Demonstrate respect for the integrity and perspectives of others in all professional contexts	PH 826 Principles of Community Intervention Research	Community Activity. Select a community group that is of some interest to you and also relates to an important public health issue. Find a way to participate in this community group. This could involve volunteering at a homeless shelter, joining a community task force on mental health or juvenile justice reform, or sitting in on a support group of some sort. It does not need to be a group that is in sync with your particular public health values. For example, I am in favor strict gun control, but could see the value of participating in group activities with gun enthusiasts to look for areas where agreement or compromise might be possible. Anything goes, as long as you can articulate why you are interested in this community group and its relevance to a public health concern. You must find a way to spend at least 15 hours with this group (not necessarily in group meetings) over the course of the semester, so you should think carefully

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
		about whether that is possible before deciding on a particular group. Based on your experience with this group, you must complete a small project. This could be a mini-research proposal that pertains to an issue your community is concern about. It could be a report based on a series of interviews intended to identify research questions that your community might be interested in addressing. It's important to consider ethical issues you are likely to encounter. For example, do you identify yourself as a student doing an assignment? How do you do that and how might you address concerns that arise about your role? What is your commitment to this group? Is the relationship one-way (benefiting only you)? How do you make it more reciprocal? You will share your project with your peers and submit a project report. (700-900 words; 20%). You may work with a group that you are already working with as long your project involves new research that is community focused.
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	This competency is weaved throughout the course, because of its relevance to working respectively with often marginalized communities. It is also a core principle of co-learning within CBPR. Week 7 is devoted to cultural competency, cultural humility and trust in participatory research. We discuss the importance of these skills in community engaged work and professional context and tie them to issues of power and privilege. Students complete a community interactions and reflections exercise during the semester. Because the main goal of this class is to develop skills in CEnPR, it is critical that each student interact with the community throughout the course. During the pandemic, the goal of the group project is to design a CEnPR project targeting one or two related health disparities issues in Milwaukee or Wisconsin; project may require contact with external agencies outside of class time. The product is a TED talk targeting multiple audiences. The group presentation will be assessed for succinctness, clarity, and completeness.
10. Demonstrate an advanced understanding of how to manage ethical issues	PH 776 Qualitative Approaches	1: Creation of informed consent document assignment (graded; assignment total = 6 pts). Final proposal has to include the following: Briefly explain how you will keep your participants and their data safe if you are doing human subject research. It may be helpful to refer back to the IRB activity here. That section is graded as follows: Data collection and human subject

Table D18-2.4 Assessment of Competencies for PhD in Public Health – Community and Behavioral Health Promotion Concentration*		
Competency	**Course number(s) and name(s)**	**Describe specific assessment opportunity[n]**
in community and behavioral health research and practice		strategies are appropriate, clear, justified, and help address the research question(s) (3 points). 2: Complete and Upload CITI Human Subjects Training. All students are required to complete the online CITI (Collaborative IRB Training Initiative) module for Social & Behavioral Researchers. CITI is a web-based training program on issues relating to human subjects research.
	PH 819 Social and Environmental Justice	Final Paper: Continuing to focus on the same health inequity you addressed with your conceptual framework, students will conduct a scoping literature search to identify original research articles (qualitative and/or quantitative) that address your health inequity of interest. You will then purposively sample 8-10 articles from your results to represent the extant original research on your chosen health inequity. The paper will then concisely summarize your search strategy, briefly justify your selected articles, and then provide an in-depth critical analysis of the strengths, limitations, and knowledge gaps present in the public health/medical/social science literature in your area of interest (based on the 8-10 articles). Your paper will draw on your conceptual framework to guide the analysis. Draw upon course readings on health equity, community based/engaged research, measurement, ethics, and/or theory to discuss future directions for health inequity research that furthers an agenda of environmental and social justice. The paper will conclude with recommendations for integrating critical theory and methodologies into future research on health inequities in your topic area.
	PH 831 Community Engagement and Participatory Research Approaches in Public Health	Ethical considerations from a community perspective are incorporated into all the sessions. Week 6 is usually devoted to discussion and critique of ethics in traditional research and how these approaches differ from community engaged and participatory research. Assessment: Students are expected to incorporate ethical critique and dimensions in their group project and final individual papers.

*CBHP Track faculty made word changes in Competencies #2 and #5 above in response to reviewer comments on the Preliminary Self-Study. The assessments now align more clearly to the competencies.

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.**

There are four three-credit, semester-long courses in the PhD core – courses that all doctoral students take – that cover a variety of public health research methods relevant to public health and population health. Doctoral students are required to take an intermediate biostatistics course focused on quantitative analyses in a health context. The required epidemiology class presents those core methods through a public health, health equity lens. PH801, the research seminar, uses real life examples of public health research across the five disciplines to present the breadth of methods employed in public health. Students choose a fourth core course from a set of two options. Both of these options examine methods to incorporate health equity and health disparities into study designs.

Since our PhD core is comprised of four, three-credit, semester-long courses; the instruction and assessment in the area of public health research methods meets or exceeds the equivalent of a three-credit, semester-long course.

There are additional experiences within each concentration that also address a variety of research methods. For example, the CBHP concentration requires three credits of mentored research work through PH990 prior to the preliminary exam. All concentrations require a dissertation proposal which provides an opportunity to develop a research project with the mentorship of multiple academic experts, often from different disciplines.

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

Each PhD program sets its own procedure for the production and assessment of the final research paper. Details vary across the programs, but each follows the same basic process.

PhD in Public Health: Concentrations in Biostatistics and CBHP
PhD in Epidemiology

The student consults their primary advisor to develop a research plan and form a dissertation advisory committee. Composition of the committee must be in compliance with UWM Graduate School requirements. Once the student has completed the proposal, the dissertation advisory committee reviews and approves it. Then the project can begin. The review and approval process includes a formal presentation to the committee.

Upon approval of the proposal, the student will conduct an original and significant research project under the supervision of their primary advisor. The final product is the written dissertation. The written dissertation must be reviewed and approved by the advisory committee. The review and approval process includes an oral defense of the dissertation.

Environmental Health Science (EHS)
Doctoral students must prepare and successfully defend a dissertation reporting the results of their research. The original research findings embodied in this dissertation will be acceptable for publication in refereed journals. During the final year of study, the candidate must first present a seminar open to the general public on the thesis research. Secondly, the candidate must prepare and successfully defend the dissertation conveying the results of the project in a succinct, articulate fashion to the doctoral advisory committee. A full-time student who does not pass the dissertation defense within six years of admission may be required to take another preliminary examination and be readmitted to the program.

EHS faculty use the rubric below in their evaluation process for this last milestone. The dissertation committee is evaluating both the oral defense and the written product. The committee assesses the student's clarity of presentation, ability to answer questions during both the public and private portions of the defense, knowledge of the subject matter, ability to synthesize information, originality of ideas, appropriateness of experiments, and clarity of writing.

Assessment Rubric for the Dissertation Defense Evaluation Criterion (Scale of 1-5)
• A score of 5 exceeds expectations
• A score of 3 meets expectations
• Anything below a score of 3 does not meet expectations

- Did the student demonstrate an integrated knowledge of public health?
- Did the student demonstrate knowledge of discipline specific concepts within Environmental Health Sciences as well as the subject matter in the specific proposal?
- Did the student demonstrate good communication skills, both written and oral?
- Did the student demonstrate an ability to synthesize information clearly?
- Were the ideas/results put forth in the thesis original ideas with no duplication with previous studies?
- Was the science/experimental methodology presented performed appropriately?
- Will the data chapters in the thesis document be able to be converted into manuscripts, if they have not been published prior to the thesis defense?

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.

The 2021-22 Graduate Student Handbook includes discussion of the dissertation for each of the four PhD programs.

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.

See ERF D18.7 for six dissertations completed in 2019-20.

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.

Faculty assess the doctoral students in the Foundational Knowledge Objectives in the PhD core curriculum courses listed in Table D18-1 above. Each of these semester courses is three credits.

UWM has a campus credit hour policy, as found in Faculty Document #2838 (2012). All Zilber School syllabi include language that specifies the number of hours per credit that student can expect to spend in class and any labs and for completing all assignments. For a three-credit course, the total number of hours is 144 hours, based on no less than 48 hours per credit.

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.

See ERF D18.9 for course syllabi listed in Tables D18-1 and D18-2.

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

The doctoral programs all address the 12 foundational knowledge objectives, deliver exposure to multiple public health research approaches, and require a rigorous, original research product.

Strengths

- Curriculum grounds students in required public health knowledge components
- Research training is rigorous and spans public health approaches

Challenges

- Lack of uniformity in policies and procedures across doctoral programs may be a barrier for students
- Loss of faculty and budget constraints impact recruitment of robust entering cohorts and variety of course offerings

Plan

- Examine doctoral program array for any consolidation opportunities to maximize faculty participation in instruction and mentoring
- Assess other UWM health-related doctoral programs for synergies in coursework

D19. All Remaining Degrees

NOT APPLICABLE

D20. Distance Education

NOT APPLICABLE

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 Zilber School of Public Health (the Zilber School) is a non-departmentalized, interdisciplinary school organized into five program areas: Biostatistics, Community and Behavioral Health Promotion (CBHP), Environmental Health Sciences (EHS), Epidemiology, and Public Health Policy and Administration (PHPA). Full-time primary faculty members are appointed in a particular program area. Their education and experience are appropriate for their respective degree levels in the school of public health. Faculty are listed in Table E1-1.

Table E1.1: Primary Instructional Faculty Alignment with Degrees Offered, Academic Year 2021-22						
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**
Young Cho	Associate Professor	Tenured	PhD	University of Chicago	Sociology	Community & Behavioral Health Promotion
D. Phuong (Phoenix) Do	Associate Professor	Tenured	PhD	RAND Graduate School	Policy Analysis	Public Health Policy & Administration
Keith Dookeran	Visiting Associate Professor	Non-Tenure Track Faculty	MD, PhD	University of Illinois at Chicago	Epidemiology	Epidemiology & Biostatistics
Paul Florsheim	Professor	Tenured	PhD	Northwestern University	Clinical Psychology	Community & Behavioral Health Promotion
Loren Galvao*	Senior Scientist	Non-Tenure Track Faculty	MD, MPH	Federal University of Pelotas, Brazil University of Michigan	Medicine Health Behavior and Health Education	Public Health Policy and Administration
Shengtong Han	Visiting Assistant Professor	Non-Tenure Track Faculty	PhD	Chinese University of Hong Kong	Statistics	Biostatistics
Amy Harley	Associate Professor	Tenured	PhD, MPH, RD	Ohio State University	Public Health	Community & Behavioral Health Promotion
Chiang-Ching (Spencer) Huang	Professor	Tenured	PhD	University of Michigan	Biostatistics	Biostatistics
Amy Kalkbrenner	Associate Professor	Tenured	PhD, MPH	University of North Carolina at Chapel Hill	Epidemiology	Environmental Health Sciences
Linnea Laestadius	Associate Professor	Tenured	PhD, MPP	Johns Hopkins Bloomberg School of Public Health	Public Health Policy	Public Health Policy & Administration
Michael Laiosa	Associate Professor	Tenured	PhD	State University of New York, Upstate Medical University	Microbiology and Immunology	Environmental Health Sciences
Lorraine Halinka Malcoe	Associate Professor	Tenured	PhD, MPH	University of California, Berkeley	Epidemiology	Epidemiology
Todd Miller	Associate Professor	Tenured	PhD	University of Maryland	Marine Estuarine Environmental Sciences	Environmental Health Sciences

Table E1.1: Primary Instructional Faculty Alignment with Degrees Offered, Academic Year 2021-22						
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**
Emmanuel Ngui	Associate Professor	Tenured	DrPH	University of North Carolina at Chapel Hill	Public Health	Community & Behavioral Health Promotion
Bernadette Okwu**	Lecturer	Instructional Academic Staff	PhD c (spring 2022) MPH	University of Wisconsin - Milwaukee Joseph J. Zilber School of Public Health George Washington University Milken Institute School of Public Health	Public Health Maternal & Child Health	Community & Behavioral Health Promotion
Renee Scampini	Lecturer	Instructional Academic Staff	PhD MS	University of Wisconsin-Milwaukee Boston University	Urban Studies Nutrition and Dietetics	Public Health Policy and Administration
Amanda Simanek	Associate Professor	Tenured	PhD, MPH	University of Michigan	Epidemiologic Sciences	Epidemiology
Kurt Svoboda	Associate Professor	Tenured	PhD	State University of New York at Stony Brook	Neurobiology and Behavior	Environmental Health Sciences
Nour Taha	Lecturer	Instructional Academic Staff	MS BS	Jordan University of Science and Technology	Anatomy Dentistry	Biostatistics
Ellen Velie	Professor	Tenured	PhD, MPH	University of California, Berkeley	Epidemiology, Epidemiology and Biostatistics (MPH)	Epidemiology
Lance Weinhardt	Professor	Tenured	PhD	Syracuse University	Clinical Psychology	Community & Behavioral Health Promotion

Table E1.1: Primary Instructional Faculty Alignment with Degrees Offered, Academic Year 2021-22						
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**
Musa Yahaya	Lecturer	Instructional Academic Staff	PhD MPH	Southern Illinois University Usmanu Danfodio University, Sokoto, Nigeria	Public Health Education Community Health	Community & Behavioral Health Promotion
*List faculty in alphabetical order.						
^ Classification of faculty may differ by institution, but may refer to teaching, research, service faculty or tenured, tenure-track, non-tenure-track faculty or alternative appointment categories used by the school or program.						
Provide data for the year during which the site visit takes place. If the site visit takes place in fall 2016, the template must present data for fall 2016. If the site visit takes place in spring 2017, the template must present data for spring 2017.						

*Dr. Galvao was PIF as a full-time lecturer in the fall 2021 semester.

** Ms. Okwu is PIF as a full-time lecturer in the spring 2022 semester.

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.**

The Zilber School engages instructors as needed in support of the curriculum. Specific opportunities for affiliate (members of the UWM faculty) or ad hoc (no current UWM appointment) appointments occur during sabbaticals, leaves, and for research buy-outs as fixed-term appointments. Usually professionals in the community, ad hoc faculty are often known to faculty or have worked with someone connected to the school on a research project. Their education and experience qualify them to provide instruction for required track courses. Indeed, among the mix of ad hoc faculty in spring 2021 were four alumni, two from the MPH Program and two from the CBHP and EPI PhD Programs. One alumna was an ad hoc faculty member in Fall 2021, a graduate from the CBHP PhD program.

Doctoral students also have opportunities to develop and hone their teaching skills in the BSPH and MPH Programs. For example, in spring and summer 2021, five doctoral students in the CBHP Track taught a combination of core and required courses. In Fall 2021, one doctoral student in the CBHP track taught a course in the BSPH Program.

Table E1-2. lists faculty who are teaching courses as affiliate or ad hoc appointments in AY 2021-22.

Table E1.2: Non-Primary Instructional Faculty Regularly Involved in Instruction, Academic Year 2021-22							
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**
Alexa Anderson	Affiliate Faculty	Assistant Professor UWM College of Nursing	12.5%	PhD MA	University of Vermont	Experimental Psychology	Biostatistics
Paul Biedrzycki	Non-tenure track ad hoc Faculty	Consultant Director Disease Control & Environment Health (retired) City of Milwaukee Health Department	12.5%	MBA MPH	Marquette University University of Minnesota Twin Cities	Business Public Health	Environmental Health Sciences
Jill Denson	Non-tenure track ad hoc Faculty	Public Health Supervisor Public Health Madison & Dane County	12.5%	PhD MSW	University of Wisconsin-Milwaukee University of Wisconsin-Milwaukee	Community and Behavioral Health Promotion Social Work	Community and Behavioral Health Promotion
Kelsi Faust	Non-tenure track Faculty	Academic Advisor BSPH Program	12.5%	MS	University of Wisconsin-Milwaukee	Adult, Continuing & Higher Education Admin	BSPH Generalist
Anne Odusanya	Non-tenure track ad hoc Faculty	Director Children & Youth with Special Health Care Needs Wisconsin Department of Health Services	12.5%	DrPH MPH	Georgia Southern University University of South Florida	Community Health Behavior and Education Maternal & Child Health	Community and Behavioral Health Promotion
Mary Elise Papke	Non-tenure track Faculty Senior Special Lecturer	Director, Accreditation Assessment & Community Engagement University of Wisconsin – Milwaukee Joseph J. Zilber School of Public Health	12.5%	DrPH MPH MA	University of Illinois-Chicago Yale University New York University	Community Health Sciences Health Services French Literature	Public Health Policy and Administration
Darren Rausch	Non-tenure track ad hoc Faculty	Director/Health Officer, Greenfield Health Department	12.5%	PhD c MS	University of Wisconsin - Milwaukee Joseph J. Zilber School of Public Health University of Iowa	Public Health Epidemiology	Community and Behavioral Health Promotion

Table E1.2: Non-Primary Instructional Faculty Regularly Involved in Instruction, Academic Year 2021-22							
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**
Kourosh Ravvaz	Non-tenure track ad hoc Faculty	Clinical Data Scientist Brigham & Women's Hospital	12.5%	PhD MPH	University of Wisconsin-Milwaukee Tehran University of Medical Sciences	Biomedical & Health Informatic Public Health	Biostatistics
Linda Wesp	Affiliate Faculty	Clinical Assistant Professor UWM College of Nursing	50%	PhD MSN-FNP	University of Wisconsin-Milwaukee University of Illinois-Chicago	Nursing	Epidemiology
Jennifer Woo	Non-tenure track ad hoc Faculty	Postdoctoral Fellow National Institute of Environmental Health Sciences	12.5%	PhD MPH	University of Wisconsin-Milwaukee Loma Linda University	Epidemiology Public Health Practice	Epidemiology

* UWM considers one course as 12.5% FTE. Individuals' FTE are based on total number of courses taught in the academic year.

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

See ERF E1.3 for CVs for faculty listed in Tables E1-1 and E1-2.

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

Eight PIF faculty left the Zilber School between fall 2019 and fall 2021. Total faculty members declined from 26 in fall 2018 to 17 in Fall 2021, with another departure at the beginning of the fall 2021 semester. With the total PIF below the required 21 minimum, the school conducted a search for three lecturers during summer 2021. Two lecturers began in the fall semester, with teaching responsibilities in the BSPH and MPH curricula. In addition, two lecturers were hired for AY 2021-22, bringing the total PIF to 21. One of these lecturers left the school after the fall semester for personal reasons, and a current graduate student has been hired as a full-time lecturer for the spring semester. The total PIF count remains at 21. In addition, the school has a contract with a third permanent instructor beginning in August for AY 2022-23 (Titled as Visiting Assistant Professor). The school is conducting a search for a tenure-track faculty in the Public Health Policy and Administration Track for AY 2022-23.

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

Strengths

- Well qualified faculty
- Five successful tenure promotions in 2019-2020 and 10 satisfactory post-tenure reviews between 2018-2020
- Strong relationships with local public health professionals for ad hoc faculty positions
- Filled three permanent instructional positions (Two Lecturers started in Fall 2021; one Visiting Assistant Professor to start in Fall 2022)

Challenges

- Recent faculty turnover necessitating short- and long-term hiring

Plan

- Onboard doctorally-prepared Visiting Assistant Professor for an August 2022 start date. Signed contract in hand
- Recruit one tenure-track faculty in the Public Health Policy and Administration Track during AY 2021-22 for an August 2022 start date.

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.**

Practice Experience Perspectives – Community Partners
Integrating practice in the classroom is a key dimension of the school's mission. The graduate programs draw on public health practitioners as guest lecturers, preceptors, research partners, and speakers for the "On Public Health" series. These practitioners work in governmental public health, non-profit organizations, and health systems. Supportive of the school's curriculum, they are making valuable contributions to public health workforce development in the southeast region. Field Experience preceptors, the Capstone MPH panel, and the Mock Interview event are three examples of how MPH students benefit from practitioners' viewpoints for professional development.

Regarding preceptors, about 60 researchers and practitioners have served as preceptors for BSPH and MPH field placements and as community partners for MPH Capstone projects. See D5 for discussion of the Field Experience and D7 for discussion of the Capstone.

Turning to the Capstone MPH panel and Mock Interview event, both alumni and community partners have been invited to participate in these events. Table E2.1 presents the speakers for the spring 2020 and spring and fall 2021 MPH panels, which the Public Health Graduate Student Association (PHGSA) coordinated. The speakers shared their career stories and answered questions.

Table E2.1 MPH Capstone Panel Speakers – Spring 2020 and 2021

January 28, 2020		
Panelists	**Position**	**Organization**
Madeline Kornbeck, MPH – CBHP 2016	Community Alliance Coalition Coordinator	Greendale Health Department
Rachel Lecher, MPH – EPI 2017	Health/Nutrition Manager	Head Start
Elise Mosley-Johnson, MPH – PHPA 2016	Research Program Coordinator, Center for Advancing Population Science	Medical College of Wisconsin
Lilliann Paine, MPH – CBHP 2013	Chief of Staff for the Health Commissioner	City of Milwaukee Health Department
Nick Tomaro, DVM, MPH – EHS 2016	Public Health Emergency Response Planning Coordinator	City of Milwaukee Health Department

Table E2.1 MPH Capstone Panel Speakers – Spring 2020 and 2021		
February 1, 2021		
Jazzmyne Adams, MPH – PHPA 2018	Program Director, Department of Otolaryngology and Communication Sciences	Medical College of Wisconsin
Bethany Canales, MPH – EPI 2017	Statistician, Institute for Health Equity	Medical College of Wisconsin
Megan Sinclair, MPH – CBHP 2020	Health Services Supervisor	Next Door Milwaukee
Maggie Thelen, MPH – EHS 2016	Climate and Health Program Manager, Bureau of Environmental and Occupational Health	WI Department of Health Services, Division of Public Health
September 14, 2021		
Mikaela Becker, MPH – PHPA 2019	Research Supervisor	Vivent Health
Darcy DuBois, MPH – CBHP 2014	Health Officer	City of Oak Creek Health Department
Rachel Morgan, MPH – EHS 2018	PhD Candidate, Environmental Health Sciences	University of Michigan School of Public Health
Mireille Perzan, MPH – EPI 2019	MCH Epidemiologist / PRAMS Project Director	WI Department of Health Services, Division of PH
Abigail Thorgerson, MPH – BIOSTATS 2020	Biostatistician	Center for Advancing Population Science, Medical College of Wisconsin

Community partners, alumni, and doctoral students contribute to the MPH Capstone Mock Interview event. Table E2.2 lists the interviewers for the MPH Mock Interview events in spring 2020 and 2021. The alumni and partners serve as interviewers, share feedback with the students, and join them afterwards for a networking reception. Doctoral students also participated as interviewers (seven in each semester). The spring 2020 event included awards for the top student interviews, while the spring 2021 event was conducted virtually. The fall 2021 event was also conducted virtually, with five doctoral students (in the CBHP, EHS, and EPI Tracks) and one BSPH academic advisor participating as interviewers.

Table E2.2 MPH Mock Interview Interviewers – Spring 2020 and Spring 2021		
February 5, 2020		
Interviewer	**Position**	**Organization**
Marissa Jablonski, PhD	Instructor*	UWM Master of Sustainable Peacebuilding (MSP) Program
Hannah Kraussel, MPH – EPI 2018	Disease Intervention Specialist**	City of Milwaukee Health Department
Fay Osman, MPH – EHS 2018	Associate Researcher, Department of Medicine	UW-Madison School of Medicine and Public Health
Lilliann Paine, MPH – CBHP 2013	Chief of Staff for the Health Commissioner	City of Milwaukee Health Department
Katie Pritchard, PhD	Executive Director	Data You Can Use
Michael Stevenson, MPH – CBHP 2014	Director of Health Strategy***	City of Milwaukee Health Department

Table E2.2 MPH Mock Interview Interviewers – Spring 2020 and Spring 2021		
DeDe Williams, BS	Executive Director	Milwaukee Area Health Education Center (AHEC)
February 22-23, 2021		
Jazzmyne Adams, MPH – PHPA 2018	Program Director, Department of Otolaryngology and Communication Sciences	Medical College of Wisconsin
Mikaela Becker, MPH – PHPA 2018	Youth Prevention Program Lead	Elevate, Inc.
Shelby Guendel, MPH – CBHP 2018	Community Programs Coordinator	Jewish Family Services
Madeline Kornbeck, MPH – CBHP 2016	Community Alliance Coalition Coordinator	Greendale Health Department
Reshma Kurian, MPH – PHPA 2018	COVID-19 Vaccine Site Coordinator	City of Milwaukee Health Department
Rachel Morgan, MPH – EHS 2018	EHS Doctoral Candidate	University of Michigan School of Public Health
Kevin Smith, MPH – EHS 2015	Environmental Health Specialist	Clark County (WI) Health Department

*As of 2020: Executive Director, UWM Freshwater Collaborative
**As of 2020: Public Health Emergency Response Planning Coordinator, City of Milwaukee Health Department
***As of 2021: Evidence and Policy Analysis Team Leader, County Health Rankings and Roadmaps, UW-Madison Population Health Institute

The BSPH conducted the first Mock Interview events as part of the PH 600 Integrative Experience course in AY 2020-21. Among the interviewers were one community partner and three alumni, in addition to three doctoral students and faculty and staff members. Table E2.3 below lists the practitioner interviewers for the AY 2020-21 fall and spring semesters as well as the fall 2021 semester.

Table E2.3 BSPH Mock Interview Event Interviewers Fall 2020, Spring 2021 and Fall 2021		
November 10, 2020		
Interviewer	**Position**	**Organization**
Suzanne Letellier, MA	Director, Community Health Programs	Milwaukee Area Health Education Center (AHEC)
April 13, 2021		
Reshma Kurian, MPH – PHPA 2018	COVID-19 Vaccine Site Coordinator	City of Milwaukee Health Department
Whitney Qualls, MPH – EPI 2020	Doctoral Student	Simon Fraser University
Maggie Thelen, MPH – EHS 2016	Climate and Health Program Manager, Bureau of Environmental and Occupational Health	WI Department of Health Services, Division of Public Health
Between November 10 – December 10, 2021		
Michael Gonzalez, MPH – EHS 2020	PhD Student – Environmental Health Sciences	Zilber School of Public Health
Chansouda Lor, MPH – EHS 2021	Lead Risk Assessor	City of Milwaukee Health Department

Table E2.3 BSPH Mock Interview Event Interviewers Fall 2020, Spring 2021 and Fall 2021		
Michael Stevenson, MPH – CBHP 2014	Evidence and Policy Analysis Team Leader, County Health Rankings and Roadmaps	UW-Madison Population Health Institute

Table E2.4 presents selected guest speakers in both undergraduate and graduate courses during AY 2020-21 and fall 2021. The table does not include speakers from the UWM campus or Zilber School faculty and current graduate students. Examples of campus resources represented include the Golda Meir Library, Career Planning and Resource Center, the Center for International Education Study Abroad Office, the Center for Community-based Learning, Leadership and Research, Inclusive Excellence Center, Office of Undergraduate Research, and UWM Institutional Review Board.

Table E2.4 Selected Classroom Speakers – AY 2020-21 and Fall 2021		
FALL 2020		
Undergraduate Courses		
Course	**Speaker/Position**	**Organization**
PH 100 New Student Experience in Public Health	Alex Faust, Business Development Officer	Tri City National Bank
	Mikaela Becker, MPH (PHPA 2019) Youth Prevention Program Lead	Elevate, Inc.
	Carla Echeveste, “All of Us” Research Program Coordinator	Medical College of Wisconsin
PH 355 Public Health Research Methods I	Lindsay Emer, PhD (CBHP 2017), Research Scientist, Institute for Health & Equity	Medical College of Wisconsin
	Mackenzie Ringle, MPH (CBHP 2020), COVID-19 Support Coordinator	UWM
	Mireille Perzan, MPH (EPI 2019), WI Population Health Fellow; MCH Epidemiologist	WI Department of Health Services
	Jenn Woo, PhD (EPI 2020), Postdoctoral Fellow, National Institute of Environmental Health Sciences	National Institutes of Health
Graduate Courses		
Course	**Speaker/Position**	**Organization**
PH 706 Perspectives in Community and Behavioral Health	Tifany Frazer, MPH, Program Manager, Office of Global Health	Medical College of Wisconsin
	Anneke Mohr, MPH, MSW, Coalition Coordinator	City of Milwaukee Tobacco-Free Alliance, Community Advocates
	Michael Stevenson, MPH (CBHP 2014), Director of Health Strategy	City of Milwaukee Health Department
PH 743 Environmental Risk Assessment	Daniel Flynn, JD, Partner, Attorney	DiCello Levitt Gutzler

Table E2.4 Selected Classroom Speakers – AY 2020-21 and Fall 2021		
	Renee Kalmes, MSPH, CIH, Principal Scientist & Office Director, Health Sciences	Exponent
PH 768 Cancer Epidemiology	Dorothy Pathak, PhD, Cancer Epidemiologist	Michigan State University
	James Trosko, PhD, Cancer Biologist	Michigan State University
PH 779 Public Health Policymaking and Policy Analysis	Mike Bare, MA, Research Director and Program Coordinator	Community Advocates Public Policy Institute
	Michael Tynan, MPH, Public Health Analyst, Office on Smoking and Health	Centers for Disease Control and Prevention
SPRING 2021		
Undergraduate Courses		
Course	**Speaker/Position**	**Organization**
PH 319 Introduction to Health Disparities	Dru Bhattacharya, Vice President of Diversity, Equity and Inclusion	Advocate Aurora Health
	Anthony Harris, Peer Navigator	Diverse & Resilient
	Kirsten Helgeson, Founder & CEO	Just a Girl
	Jay Johnson, Youth Program Coordinator	Victory Garden Initiative
	Sherrill Knezel, Graphic Recording Artist	Meaningful Marks
	Manny Lara, Director of Human Resources	Progressive Health Center
	Logan Self, Community Engagement Coordinator	Vivent Health
PH 427 Strategies for Action in Public Health	Rose Hennessy Garza, PhD (CBHP 2020), Postdoctoral Research Associate	UW-Madison School of Medicine and Public Health
	Darren Rausch, MPH, Health Officer	Greenfield Health Department
Graduate Courses		
Course	**Speaker/Position**	**Organization**
PH 704 Principles and Methods of Epidemiology	Melissa Ugland, MPH, Principal	Ugland Associates
PH 706 Perspectives in Community and Behavioral Health	Laura Conklin, MPH, Director, Community Health Initiatives	American Academy of Pediatrics
	David Frazer, MPH, Associate Director	Center for Urban Population Health (Aurora Research Institute, UW-Madison School of Medicine and Public Health, UWM)
	Stephanie McCoy, PhD, MPH, MPS, CHES, Qualitative Research Manager	Susan G. Komen

Table E2.4 Selected Classroom Speakers – AY 2020-21 and Fall 2021		
FALL 2021		
Undergraduate Courses		
Course	**Speaker/Position**	**Organization**
PH 100 New Student Experience in Public Health	Alex Faust / Business Development Officer	Tri City National Bank
	Brandon Osborn / Research Associate	AMTC & Associates
	Sarah Wanek	Public Health Madison & Dane County
Graduate Courses		
Course	**Speaker/Position**	**Organization**
PH 758 Social Epidemiology*	Jenn Woo, PhD, MPH / Post-Doctoral Fellow	National Institute of Environmental Health Sciences
PH 779 Public Health Policymaking and Policy Analysis	Mike Bare, Research and Program Coordinator	Community Advocates Public Policy Institute
	Darcie Warren, MPP / Principal & Founder	Growing Violets, LLC
	Michael Tynan / Public Health Analyst	Centers for Disease Control and Prevention Office on Smoking and Health
	Katie Milgrom / Co-Lead (Former Deputy Press Secretary for Senator Feingold)	APCO North America Health Practice
PH 919 Core Seminar in Community and Behavioral Health Promotion	Sheri Johnson, PhD / Director	UW Madison Population Health Institute

Another component of the school's integration of practice into the curriculum and faculty research is the partnership with the City of Milwaukee Health Department (MHD). MHD played an important role in the school's conception, with the Health Commissioner and other staff serving on the initial planning committee. Seen as a way to create synergy through research and practice initiatives for improving health in the city, this partnership has included Field Experience placements, research presentations, and collaborations between faculty and MHD in areas such as: 1) water testing at Lake Michigan beaches; 2) Fetal Infant Mortality Review; and most recently, 3) COVID-19 case monitoring, mitigation strategies, contact tracing, and vaccine distribution consultation. Indeed, several faculty served officially as volunteer scientists during the pandemic, helping MHD staff with data analysis and dissemination. Undergraduate and graduate students have also been involved in these projects. For example, undergraduate, MPH and doctoral students have collected water samples from the Milwaukee-area beaches and participated in the testing and analysis in the MHD Lab.

The original plan for the Zilber School's new building downtown included space for MHD. Several programs were housed in the Zilber Building beginning in 2012 when the school moved here from the UWM campus, including the Office of Policy and Community Engagement and the Office of Violence Prevention. MHD moved out in 2019 for financial reasons. Recent changes in leadership at MHD and the Zilber School led to a renewed effort to move some MHD programs back into space on the second floor and to explore the creation of a formal academic health department agreement. A space sharing agreement has been approved by both UWM and MHD and is pending an official move-in date in 2022.

Since the MPH Program was launched in 2011, students have been connected to MHD. To date, MHD has hosted 50 MPH Field Experience and Capstone projects. One BSPH student was placed at MHD in spring 2021, and during summer 2021 four MPH students are working on the community health assessment and COVID-19 vaccine distribution and in the Laboratory.

Turning to the state-level practice connections, the Zilber School has placed 15 MPH students for Field Experiences and Capstone projects in the WI Department of Health Services Division of Public Health. Faculty also have research connections in tobacco, MCH, and aging, among other areas. However, the school and state health department have not had formal connections for research and workforce development. This approach is beginning to change, spurred in part by a partnership with the MCH Title V Program for the new MCH Certificate funded through the HRSA MCH Public Health Catalyst Program. The first students enrolled in fall 2021, and the goal is to create up to two ongoing field placements to provide consistency in project development, implementation, and evaluation. Another recent state-level research connection is Amy Harley serving on the steering committee for the Wisconsin Public Health Research Network (https://wphrn.nursing.wisc.edu/)

Practice Experience Perspectives – Faculty with Practice Experience
Four faculty have practice experience outside academia.

Amy Harley served as Wellness Coordinator with the National Institute for Fitness and Sport.

Lorraine Halinka Malcoe worked as an epidemiological researcher with the California Birth Defects Monitoring Program in the California Department of Public Health.

Emmanuel Ngui worked in Kenya with the Ministry of Health to establish pediatric rehabilitation programs and practices in hospitals and schools for children with learning and other developmental disabilities. In North Carolina, Dr. Ngui was involved in several projects to develop community and state collaboratives for addressing minority health issues and disparities. For example, he co-led the North Carolina Department of Health and Human Services Eliminating Health Disparities Steering Committee, which developed the first state action plan to address racial/ethnic disparities in health. He also worked with community-based organizations and state/local agencies to address HIV/AIDS through a community collaboration and demonstration grant from the national Office of Minority Health and Health Disparities.

Musa Yahaya worked in Nigeria with UNICEF on vaccine security and logistics and with WHO as a national facilitator.

In addition, **Elise Papke** has practice experience in local and state health departments in Indiana and a Federally Qualified Community Health Center in Connecticut.

The school's support of the faculty's ongoing practice connections is tied to the school's mission. Faculty, staff, and students value the school's connections to communities in Milwaukee and throughout Wisconsin. Indeed, to advance population health and health equity in Milwaukee's diverse neighborhoods and throughout the state, faculty need to collaborate with a range of community partners, and they do so through the curriculum and research and/or extramural service. In the curriculum, faculty link to practice through the MPH Field Experience (APE) and Capstone (ILE) courses as well as through projects in their own courses. For example, faculty are encouraged to recommend Field Experience placements for their MPH advisees based on their own connections either through former students or professional contacts. Faculty encourage MPH students to engage with organization partners for their Capstone projects, and faculty have maintained some of these connections over time. Students also identify partners based on Field Experience, work, or personal interest relationships.

In addition, some faculty's research and community service connect them to ongoing practice links. Health equity, cancer, tobacco, water quality, and infant mortality are examples of areas

where faculty are engaged locally. Faculty are also engaged in environmental and family health issues among others at the state level. While school policies for grant-funded course buy-outs and occasional course releases support faculty, faculty also are personally committed to maintaining links with partners locally and statewide. The COVID-19 pandemic created a unique opportunity for faculty to respond to requests for media appearances and writing, committee work, data analysis, and community-level planning with a range of non-profit and city and county governmental agencies.

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

Strengths

- Strong relationships in the Milwaukee/Southeast region practice community for research projects, adjunct faculty, guest lecturers, and preceptors
- Faculty engagement in practice community in Milwaukee and the SE region through research

Challenges

- Leadership changes at Zilber School and City of Milwaukee Health Department; limited formal connections
- Limited formal interaction with the WI Department of Health Services Division of Public Health
- Need to expand diversity of guest speakers in courses in response to student and Community Advisory Board input

Plan

- Finalize move-in date with MHD for Zilber School building space and explore formal Academic Health Department agreement with MHD
- Explore development of pipeline initiative through placements with WI DHS DPH (Maternal and Child Health Program & Office of the Secretary)
- Assist faculty with identifying course guest speakers from different racial and identity perspectives in a range of settings

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.**

   For primary instructional faculty, the Zilber School ensures that faculty maintain their currency in their areas of instructional responsibility through annual reviews, special opportunities and the course planning process. During the annual review process, faculty highlight their research and professional development activities and courses taught, and the EC assesses the faculty member's instructional and research portfolio. The Faculty Chair supports professional development activities based on the faculty member's work and interests. However, with the UWM travel freeze over the past year and a half, options have been limited to virtual conferences using grant funding.

   The school offered a new opportunity for currency when the campus shut down in March 2020 due to the COVID-19 pandemic and made the switch to online instruction. The Center for Excellence in Teaching and Learning (CETL) offered an online teaching workshop. The Zilber School offered faculty who completed this workshop a $500 benefit as incentive for preparing for the new teaching environment.

   The course planning process is coordinated by the Faculty Chair. The Faculty Chair reviews faculty members' teaching requests and creates the schedule based on faculty interests and expertise as well as undergraduate and graduate curricular needs. The Associate Dean for Academic and Student Affairs and Program Directors have input into final assignments.

   For non-primary instructional faculty, the Faculty Chair as well as the Associate Dean for Academic & Student Affairs and Program Directors review the CVs of prospective ad hoc faculty for areas of content related to their practice experience. They also meet with affiliate and ad hoc faculty to review the course content and syllabus to confirm that the course is a good fit. The Faculty Chair may also connect them with both other faculty who may be knowledgeable in a particular aspect of a course and the Health Librarian at the Golda Meir Library on campus. Adjunct faculty have access to all library resources during their teaching semester.

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.**

   UWM policies provide guidelines to schools and colleges for the annual evaluation of faculty competence and performance. Five approaches are used to evaluate all faculty. Each of these five methods considers teaching effectiveness as part of the review.

   First, each faculty member (tenure track and non-tenure track) completes an annual Faculty Performance Report documenting accomplishments during the previous calendar year. Metrics from student course evaluations are reported on this form. The Faculty Performance Reports are reviewed by the Faculty Chair and Executive Committee (EC) to ensure that all faculty are meeting their

workload responsibilities. The EC applies a ranking system for each faculty review indicating whether they met expectations or not. If necessary, the EC is charged with making workload adjustments.

Second, Probationary Faculty (non-tenured) are reviewed annually to ensure that they are meeting their research, teaching, and service obligations and are on track for tenure and promotion. This process is coordinated by the Faculty Chair, Faculty submit their updated CVs, course evaluations, and a personal statement electronically to the EC following the established timeline. Faculty provide data and narrative in the areas of research, teaching and advising, and service. They may choose to have a face-to-face meeting with the EC and may decide to respond to the EC's comments and assessment. Each faculty member is provided with written feedback from these annual reviews as well as at the three-year contract renewal milestone.

Third, with regard to tenure and promotion, the same criteria and expectations for the areas of research, teaching and advising, and service are applied in each case. Faculty submit their materials early in the sixth year. The process includes a recommendation from the EC to the Dean for tenure and promotion. The Dean seeks the advice of the appropriate divisional committee on campus for approval and transmits their recommendation to the Provost, then to the Chancellor, and finally to the Board of Regents. University rules, regulations, and expectations are documented in the UWM Faculty Policies and Procedures found in ERF A1.2. The Zilber School Tenure and Promotion Policy is also in ERF A1.2.

Fourth, the UW-System requires that faculty engage in a post-tenure review process. The Post-Tenure Review Policy was approved by the UW Board of Regents on March 10, 2016, and is available at this link: https://www.wisconsin.edu/regents/policies/periodic-post-tenure-review-in-support-of-tenured-faculty-development/. UWM and the Zilber School apply this policy for post-tenure reviews. In addition, the faculty adopted a post-tenure review policy, which complements the campus policy. See ERF E3 for the school's post-tenure review policy.

Finally, the Zilber School has developed a standardized course evaluation protocol that is administered near the end of each semester to elicit students' evaluation of the course quality and instructor effectiveness. The instrument was developed by the Graduate Program Committee (GPC), which regularly revisits it to re-approve and revise if needed. The Undergraduate Program Committee (UPC) adopted the same form for the BSPH courses. Students receive one evaluation per enrolled course, and their responses are anonymous.

The Faculty Chair compiles the results of the evaluations and provides feedback to each faculty member. The Faculty Chair is responsible for identifying any systemic problems and meets with the individual faculty member to develop a plan of remediation, if necessary. The Evaluation Workgroup also considers two questions regarding student satisfaction with the overall quality of the course and instructor as indicators for faculty instructional technique. See E3.5 below.

3) Describe available university and programmatic support for continuous improvement in faculty's instructional roles. Provide three to five examples of school involvement in or use of these resources. The description must address both primary instructional faculty and non-primary instructional faculty.

The UWM Center for Excellence in Teaching and Learning (CETL) is a key resource in improving faculty instructional effectiveness. In addition to offering regular classes, workshops, and teaching certificates, CETL staff are also available to faculty for consultation in individual courses. During the transition to online teaching in spring 2020, CETL shared many resources for using Canvas, Collaborate Ultra, and other platforms to enhance student learning. Here are three examples of faculty availing themselves of CETL and other resources.

Example #1:
CETL offered an Online and Blended Teaching Program during summer/fall 2020 in anticipation of continued online courses for the fall 2021 semester. This program proved to be a valuable resource

for both PIF and ad hoc faculty. Ten faculty, four ad hoc faculty, two academic staff, and four graduate student instructors completed this program. At least one faculty member completed CETL's online teaching certificate.

Example #2:
To maintain currency in the area of measuring environmental exposures for the PH 762 Environmental Epidemiology course, especially related to the complexity of real-world mixtures, the faculty member attends monthly webinars and symposia sponsored by the National Institute for Environmental Health Sciences. She is able to incorporate current laboratory, epidemiological, and bioinformatics issues into her course materials and lectures.

Example #3:
One faculty member had observed that the quality of the term paper in the PH 303 Climate Change, the Environment and Human Health course did not meet his expectations. During his sabbatical he dedicated time to changing the design of the term project. Working with a CETL consultant, he developed a group project that included scaffolded assignments for interim assessments to acknowledge both team and individual achievements. He intends to apply the same strategies for group projects in other public health courses he teaches.

4) Describe the role of evaluations of instructional effectiveness in decisions about faculty advancement.

The EC conducts required annual reviews of the faculty in the spring semester. In preparation for these meetings, faculty complete the Faculty Performance Survey, which is due in March. The EC meets in April to discuss individual faculty survey results. Other materials related to instructional effectiveness the EC considers include special course materials, publications and presentations, and the student course evaluations.

In addition, the EC reviews faculty dossiers for promotion using campus and school guidelines. The criteria for tenure and promotion to Associate Professor and to Full Professor consider instructional effectiveness. For promotion to Associate Professor, the EC expects the faculty member to have "substantial achievements in each domain" (Criteria for Promotion Policy, 11/4/14, p. 1). For the teaching domain, "Each candidate must demonstrate a sustained commitment to effective teaching and student mentoring. The effective teacher transmits knowledge effectively, leads students to think purposely and critically, broadens the interest of students, seeks out innovative techniques, facilitates skill development toward post-graduation employment and supports students in overall professional development. The candidate is expected to have taught graduate courses and/or seminars. Their responsibilities may have included teaching undergraduate courses, developing courses or programs, developing curricula, lecturing, supervising teaching assistants and mentoring and advising" (pp. 1-2).

For promotion to Full Professor, the EC weighs the totality of the faculty member's record. Rather than relying on a checklist, the EC considers a set of five criteria. "The Zilber School considers a candidate's competence as an educator, knowledge of and ability to communicate critical knowledge, judgment in selecting and emphasizing material, ability to provide students with a broad scholarly perspective, ability to provide constructive feedback, and ability to challenge students to do their best. Consideration may also be given to a candidate's openness and receptivity to students and their ideas, comprehensiveness in teaching and planning, fairness as an evaluator of students, and ability to guide students effectively through their academic programs" (Associate to Full Professor Policy, modified 9/20/20, p. 3). See ERF A1.2 for the school's promotion policies.

For the Lecturers starting in AY 2021-22, the Faculty Chair and Dean planned an orientation process to include a mentoring component. The Faculty Chair will meet with the Lecturers to answer questions about the courses, refer them to CETL and other instructional resources, and review course evaluations with them at the end of each semester. Track Leads and other faculty also contribute to this process to ensure the Lecturers' instructional effectiveness. The Faculty Chair and

Dean will also conduct a teaching roundtable for all new AY2021-22 instructors on 01/21/2022 to cover student resources, share successful teaching strategies, and answer questions. The Dean will conduct the performance review process per campus guidelines for instructional academic staff.

5) **Select at least three indicators, with one from each of the listed categories that are meaningful to the school and relate to instructional quality. Describe the school's approach and progress over the last three years for each of the chosen indicators. In addition to at least three from the lists in the criteria, the school may add indicators that are significant to its own mission and context.**

Faculty Currency – Annual / other regular reviews of faculty productivity, relation of scholarship to instruction

Faculty on the EC assess faculty's productivity annually. Using information from the Faculty Performance Survey that each faculty member submits in the spring, the EC considers productivity related to teaching, scholarship, and service as well as the relation of research and service to instruction. For promotion reviews, the EC reviews the dossier, where material is gathered from multiple sources over several years. In addition to this review process, the Faculty Chair also considers faculty members' teaching responsibilities for the coming year in light of the annual review to align faculty knowledge, preparation, and expertise with school curricular needs.

The school indicator for this measure is percent completion of annual faculty reviews of productivity, relationship of scholarship to instruction. The school has continuously met this indictor with 100% of faculty receiving reviews each year. Table E3.5.1 shows the outcomes for the past three years, e.g., 2018-19, 2019-20, and 2020-21.

Table E3.5.1 Percent of Faculty with annual review of productivity				
Organization Goal 2. Educate current and future public health professionals in the science, practice, critical thinking, and leadership skills necessary to promote population health and reduce health inequities.				
Measure	Indicator Target	2018-19	2019-20	2020-21
O2.1 Faculty with annual reviews of productivity, relationship of research to instruction	100% of faculty have annual reviews	100%	100%	100%

Faculty Instructional Technique – Student satisfaction with instructional quality
The Zilber School employs the student course evaluations as one measure of faculty instructional effectiveness. Course evaluations are administered electronically via Qualtrics each semester. The Faculty Chair reviews all the evaluations and shares the aggregated data with each course instructor. The Faculty Chair discusses results with individual faculty based on any issues that may arise. The EC discusses quantitative and qualitative course evaluation data as part of the annual faculty review. In addition, course evaluations are also part of the promotion and tenure review process.

As part of the school's evaluation measures, faculty chose two questions from the semester Course Evaluation Questionnaire to assess instructional effectiveness: Q1 ("*I think the overall quality of the course is high*.") and Q10 ("*My overall rating of this instructor is high*."). The measure is percent of courses offered where the responses for Q1 and Q10 had a mean rating $\geq$ 4 on a 5-point scale. In the course evaluation form a score of 4 corresponds to "Agree" and a score of 5 corresponds to "Strongly Agree." Data for Q1 and Q10 in undergraduate and graduate courses are presented in Table E3.5.2 below.

Table E3.5.2 Faculty Instructional Technique: Course Evaluations Fall 2018 – Spring 2021				
Education Goal 1. Invest in people, resources, and infrastructure to foster excellence and advance the mission of the Joseph J. Zilber School of Public Health.				
Measure	**Indicator Target**	**2018-19**	**2019-20**	**2020-21**
E1.6. BSPH and graduate (MPH, MS, PhD) courses in semester with mean ≥ 4 (5-point scale) on Q1- overall quality of course is high	80% BSPH courses with mean ≥ 3.75* on Q1-overall quality of course is high	NA**	Fall 2019=80% Spring 2020= NA***	Fall 2020=90% Spring 2021=88%
	80% graduate courses with mean ≥ 4 on Q1- overall quality of course is high	Fall 2018= 70% Spring 2019 = 69%	Fall = 76% Spring 2020 = NA***	Fall = 91% Spring = 74%
E1.7. BSPH and graduate courses in semester with mean ≥ 4 (5-point scale) on Q10 - overall rating of instructor is high	80% BSPH courses with mean ≥ 3.75* on Q10 - overall quality of instructor is high	NA**	Fall 2019=100% Spring 2020=NA***	Fall 2020=90% Spring 2021=88%
	80% graduate courses with mean ≥ 4 on Q10 - overall quality of instructor is high	Fall = 74% Spring = 77%	Fall = 69% Spring = NA***	Fall = 88% Spring = 74%

*Undergraduate courses score lower on course evaluations across the UWM campus. Faculty chose a mean of 3.75 based on this experience.
**As the BSPH Program just started in spring 2019 with two transfer students, only two major courses were offered in fall 2018, and three major courses were offered in spring 2019.
***The UWM campus did not conduct spring 2020 student course evaluations due to the pandemic.

Graduate Course Evaluations
Overall, the semester grand means for the graduate courses across five semesters for Q1 and Q10 are all ≥ 4. These means account for the variation in number of students in each course and reflect general student satisfaction with the curriculum. The range for Q1/high rating for the course is 4.13 in Fall 2018 to 4.20 in Fall 2019, Fall 2020, and Spring 2021. For Q10/high rating for instructor, the range is 4.20 in Spring 2019 to 4.37 in Fall 2019.

The percent of courses where the mean is ≥ 4 varies across semesters for the two items. As the data presented in Table E3.5 above indicate, the range is 69% to 91%. Fall 2020 exceeded the 80% threshold for both Q1 (91%) and Q10 (88%). While the student evaluation response rates across the semesters are low, possible explanations for the variation in means include mix of faculty, ad hoc, and doctoral student teaching experience in a given semester as well as ad hocs' teaching experience in general. Several semesters were also affected by the pandemic, which likely had a differential impact on both instructor effectiveness and student satisfaction scores.

As another sign of positive student satisfaction with the school's curriculum, the percent of courses with a mean of ≤ 3 for Q1 and Q10 is low. For example, in spring 2019, three courses (12%; 3/26) had a mean of ≤ 3, while in fall 2019 one course had a mean below 3 (4%; 1/25). However, it should be noted that some of these courses had low evaluation response rates, which would have an impact on student satisfaction scores.

Undergraduate Course Evaluations
The number of courses offered in the BSPH program grew beginning in fall 2019 as the number of students in major courses increased. Overall, the semester grand means for the fall 2019, fall 2020,

and spring 2021 semesters for Q1 are above 3.75, ranging from 3.86 to 4.52. For Q10, meanwhile, the range is from 4.04 to 4.54. A likely explanation for this variation is level of experience in the mix of faculty and ad hoc faculty teaching in the new degree program. The quality of instruction is expected to improve as faculty gain experience teaching in the BSPH Program.

The percent of courses where the mean is ≥ 3.75 varies across semesters for the two questions. As the data presented in Table E3.5 above indicate, the range for Q1 is 80% to 90%. For Q10, the means for the three semesters exceeded the 80% threshold, including the fall 2019 semester in which all five courses had mean rating ≥ 3.75.

School-level Outcomes – Courses that involve community-based practitioners and Implementation of grading rubrics

Table E3.5 below presents data for two school-level outcomes for instructional effectiveness.

Courses that involve community-based practitioners
Connections to the Milwaukee community have been an integral part of the Zilber School since its founding. Indeed, the premise was that the school would contribute to improvement in the health of the city. Bringing in speakers to the classroom is an important way that faculty both incorporate practice and ensure that students are exposed to diverse perspectives related to race/ethnicity, gender identity, SES, and ability. While the school exceeds the target for this indicator, an area for improvement revealed in the self-study process is inviting more guests from communities of color and from local non-profits.

Grading Rubrics
Grading rubrics are an important tool for clarifying expectations in assignments and providing students with focused feedback to help them improve their work. While faculty agreed on this measure at the 5/8/20 Faculty Council meeting, the self-study process underscored the importance of developing a more consistent approach across the core curriculum. As the data below indicate, not all courses had a rubric by the end of summer 2021. Moreover, in some courses, the rubric focused on the lab component.

Based on the school's evaluation plan, the GPC discussed rubrics (Indicator E1.8) at its 11/9/21 meeting. The Accreditation Assessment Director compiled a document of rubrics for nine of 10 MPH core courses for reference. GPC members concluded that the rubrics for PH 704 Principles and Methods of Epidemiology and PH 790 Field Experience in Public Health were limited in approach and detail. They also raised the idea of defining a minimum set of criteria that all rubrics should follow.

Since the 11/9/21 meeting, Faculty for PH 704 and PH 708 Health Systems and Population Health revised their rubrics. Revisions are in progress for PH 790, and a rubric will be developed for PH 791 Leadership in Public Health. See ERF E3.5 for the GPC minutes and rubrics reference document.

Table E3-5 School-level Outcomes				
Education Goal 1. Invest in people, resources, and infrastructure to foster excellence and advance the mission of the Joseph J. Zilber School of Public Health.				
Measure	**Indicator Target**	**2018-19**	**2019-20**	**2020-21**
E1.8. MPH core courses with grading rubrics	**100%** MPH core courses with grading rubrics	90%	80%	80%
Education Goal 2. Collaborate with diverse community partners through mutual learning to increase knowledge in order to improve population health and reduce health inequities.				
E2.3. Courses involving community-based presenters annually	**4** courses engage community-based practitioners as class guest speakers annually	7	10	11

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

Strengths

- Established procedures for routine reviews of faculty productivity and teaching effectiveness using faculty performance survey and course evaluation data
- Extensive instructional resources available through Center for Excellence in Teaching and Learning (CETL)

Challenges

- Low response rates on course evaluations
- Need to enhance formal use of grading rubrics in the MPH core curriculum to 100%

Plan

- Develop and implement plan with faculty and student services staff to ensure more students complete course evaluations each semester
- Conduct annual performance reviews for new Lecturers in Spring 2022
- Include grading rubrics for discussion on GPC agenda for 2021-22

E4. Faculty Scholarship

The school has policies and practices in place to support faculty involvement in scholarly activities. As many faculty as possible are involved in research and scholarly activity in some form, whether funded or unfunded. Ongoing participation in research and scholarly activity ensures that faculty are relevant and current in their field of expertise, that their work is peer reviewed and that they are content experts.

The types and extent of faculty research align with university and school missions and relate to the types of degrees offered.

Faculty integrate research and scholarship with their instructional activities. Research allows faculty to bring real-world examples into the classroom to update and inspire teaching and provides opportunities for students to engage in research activities, if desired or appropriate for the degree program.

1) **Describe the school's definition of and expectations regarding faculty research and scholarly activity.**

Background
The Zilber School was founded on the premise that it would be a multidisciplinary, research-based academic school of innovation, translating discovery into practice. A goal was to create synergy with the campus vision of being a top-tier research university. Since achieving R1 status from the Carnegie Foundation Classification of Institutions of Higher Education in 2015, UWM has sustained this achievement, and the Zilber School plays an important role in this campus designation. Over the past 10 years, the Zilber School has the fourth-highest total level of research expenditures of all UWM schools and colleges, including Letters & Sciences.

Definition

Research and scholarship are defined as the creation of new knowledge and can be an outgrowth of research or public health practice. Critical to scholarship are the concepts of originality, critical thinking, independence, creativity, peer review (as evidence of importance to the field or discipline), and publication of results. Scholarship will be judged by its level of productivity, potential to improve the public's health, and impact on public health. Quantity of publication by itself is not necessarily a metric of quality. Each candidate must demonstrate continued growth as an independent scholar as evidenced by the development of a significant, high-quality, independent program of public health research and scholarship. For faculty who typically publish as part of team of investigators, it is important to note that while the Zilber School values inter- and multi-disciplinary work, candidates must demonstrate their independent, identifiable, and significant contribution to the research team. The research program should be well-conceived and developed, with evidence of work at all stages of the knowledge production process (e.g., publications, submitted manuscripts, draft manuscripts, conference presentations, collected data sets, intra- and/or extramural funding, submitted grants, etc.). The candidate should be moving toward forming a positive national reputation, with recognition and prominence appropriate to their level.

The Executive Committee recognizes that research and scholarship, in additional to traditional definitions, also include the generation of new knowledge through the synthesis of prior knowledge and translation of knowledge into recommendations for policies or programs to improve the public's health, and translation of research discoveries into public health interventions and community action.

Expectations
Faculty are expected to engage in research that contributes to broad public health knowledge, informs practice and policy, and enhances teaching. Among the school's research indicators are

number of proposals submitted annually and percent of faculty with external funding. Indicators related to dissemination include faculty publications in scientific journals and presentations at professional conferences. See Table B5.2 for data on the school's research indicators. Faculty address expectations through the annual review and tenure and promotion processes.

The school's three-course teaching load is intended to support research and service as commensurate with faculty in public health. The workload is differentiated to provide faculty more space for research as well as service based on their interests and goals. The school has stated expectations in the Workload Policy for tenure-track faculty as eight units of work in the areas of teaching, research, and service over the course of a nine-month contract. Research, or scholarly activities, is defined as 4 of 8 units, for 50% effort. This percentage reflects the school's emphasis on research in public health and supports UWM's recognition as an R1 research institution. See ERF E4 for the Workload Policy.

2) Describe available university and school support for research and scholarly activities.

Research Infrastructure

Development of infrastructure to support research activity has been essential to sustain our growth. In this regard, the opening of the KIRC was a key milestone for the UWM campus and the Zilber School. The fifth floor of this new building, totaling just under 12,000 usable square feet, houses the EHS PhD Program and the Bioinformatics and Biostatistics Lab. The EHS space consists of six wet-labs, with adjacencies to common core equipment such as flow cytometry, tandem mass spectrometry, and fluorescence microscopy. Additional shared laboratory space includes: a tissue culture facility, toxicology preparation room, environmental sample analysis laboratory, and a zebrafish facility including 12 recirculating fish racks (Aquaneering, Inc.). The floor also includes a 1,500 square-foot teaching lab, and offices for faculty, students, post-docs, and staff. Now, for the first time, all EHS faculty are in a contiguous laboratory setting where they can easily collaborate and communicate. Common location of EHS faculty, their labs, and equipment will also benefit student training. In addition, two vacant pods allow for future program growth.

The location of the Bioinformatics and Biostatistics Lab in the KIRC also supports collaboration among such schools as the College of Engineering and Applied Sciences (CEAS) and the School of Information Studies (SOIS) with the Zilber School. This location includes access to extensive computing resources on campus and new supercomputing clusters in a new data center in the KIRC.

Beginning in 2013, we focused on enhancing our ability to support the expanding faculty and graduate student research portfolio by hiring a full-time grants and research administration specialist. The Research Support Office, designed to offer pre- and post-award services, was strengthened by putting in place a permanent Associate Dean for Research to add to the team of the University Business Representative, a financial specialist for post-award purchasing and accounting, and our HR specialist for project-based hiring. This increased infrastructure support enabled our talented faculty to submit grant applications at a rapid pace.

Partially motivated by budget cuts at the state level, particularly those beginning in FY16, we reorganized the Research Support Office to work in concert with three other UWM health-focused schools to provide shared pre- and post-award support for our faculty. This reorganization allowed both an opportunity to pool resources across units and enhance service delivery. This cooperative, cost-saving structure, called the Shared Office for Administration of Research (or SOAR), became fully operational in July 2016, and provides improved services to the Zilber School (Researcher Guide, including SOAR specifics, is in ERF E4.2). Throughout this process, the Associate Dean for Research – along with other related duties - has focused on minimizing disruptions to grant support service. Based on our continued high rate of grant submissions through FY2020, it appears our shared services team approach works well for the school. As

testimony to SOAR's effectiveness, other units at UWM have inquired about the model for application in their units.

Policies and Procedures
The Research Support Office has put in place policies and procedures for all grant activity. The Zilber School Research Support Guide details the most recent organization of the office as well as policies and procedures. See ERF E4 for the Guide. Policies are in place for course buyouts, indirect cost returns to investigators, summer salary, and division of indirect cost returns in collaborative projects, and others. This handbook has been updated to include the new collaborative research support infrastructure.

UWM recently implemented a new policy for return of indirect costs to academic units. This policy offers faculty an incentive for obtaining research funding. Of total indirect costs associated with an external award, the campus retains 20%, while 80% comes to the unit. Individual Zilber School faculty PIs with funding receive 10% of the total indirects received by UWM, or 1/8 of the 80% (or 12.5%) that the school receives. So, the school retains 67.5% and funds the Chancellor Graduate Student Awards from this amount. In AY 2020-21, the school paid $20,000 for four awards based on merit to enhance student research productivity.

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.

Research Activities
Faculty in the five tracks in the Zilber School conduct a wide range of public health research with high impact. Faculty work in state-of-the-art wet labs, apply statistical techniques to big data, collaborate with the City of Milwaukee Health Department (MHD), and engage in research with community organizations. We highlight research areas by track below.

<u>Biostatistics</u>
In Biostatistics, research strengths include statistical genetics, bioinformatics, and methods for analysis of big data. These are significant areas of quantitative research in biomedical, public health, and translational research. There is considerable demand in the United States for people with analytic skills to make the most of big data. Data analysis that integrates different sources of biomedical and biological data will be the next frontier for innovation, competition, and productivity.

With expertise in these areas, the faculty are able to conduct a broad array of research using data that arise from modern and evolving technologies. Genetics has emerged in the past thirty years as the most prominent area of research funded by the National Institutes of Health (NIH). Expertise in study design, data collection and analysis, and development of statistical methodologies to analyze such data is vital to public health research. Program faculty are also developing expertise and collaborations studying gene-environment interactions, which brings the power of genomics to the study of connections between the environment and health that have yet to be fully understood using traditional approaches.

Example:
Spencer Huang, PhD, uses transcriptomic data from his atherosclerosis project in PH721/Introduction to Translational Bioinformatics and PH813/Practice of Biostatistical Consulting as the data set for one of the students' projects. Students learn to apply bioinformatics techniques and machine learning methods to these data for transcriptome data analysis, data normalization, and risk prediction. They also learn how to use data visualization techniques to display large genomic data and to identify gene expression signature associated with atherosclerosis.

Community and Behavioral Health Promotion Program (CBHP)
The CBHP faculty conduct research in many areas, including chronic disease prevention, nutrition and physical activity promotion, maternal/paternal and child health, HIV/STI prevention, substance abuse treatment and prevention, and mental health promotion. Some of these research areas focus on national and international health issues, and some are geared to address health concerns of the local population. Program faculty are particularly strong in the areas of community-engaged research and prevention programming. Currently, faculty are engaged in developing and testing several programs designed to reduce health inequities and promote health. Through ongoing research partnerships, students have ample opportunities to work with a wide variety of community-based agencies, including the City of Milwaukee Health Department, CARE International, and local federally qualified community health centers serving diverse populations. Because we have worked to accommodate the program to part-time working professionals, we have an unusually mature and experienced group of graduate students who enrich the academic environment and are able have a direct impact on community health. Faculty are committed to increasing the research profile of the Zilber School and the University by continuing to pursue federal funding, publishing in top tier journals, and lending their expertise to local health organizations.

Example:
Paul Florsheim, PhD, uses his ongoing research to illustrate community intervention research. In addition, he created a new project related to his expertise as part of PH 826/Principles of Community Intervention Research. The students worked on a semester-long group activity involving the design of a community-engaged research project to examine the role of neighborhood disadvantage on parents' perceived access to children's mental health services. For this activity, students interviewed community stakeholders about barriers to mental health services, used stakeholder input to design a measure of perceived access to mental health services, and drafted a consent form and research protocol for submission to the IRB. This process was used to illustrate the complexities of community intervention research as they covered the principles of community engagement, methodological issues in community level research, and ethical issues when working with disadvantaged communities. Two students in the class have continued to work on the development of this research.

Environmental Health Sciences (EHS)
In EHS, research spans the fields of developmental and environmental toxicology to environmental epidemiology. Drs. Svoboda and Laiosa lead wet lab-based research programs utilizing animal models including *Caenorhabditis elegans (*worm), *Daphnia magna (*water flea), *Mus musculus* (mouse), and *Danio rerio (*zebrafish) in toxicology-based research, which aligns well with the mission of the National Institute for Environmental Health Sciences [NIEHS]). Dr. Miller's research includes field activities (beach and water sampling across the state of Wisconsin) with wet-lab analysis. Dr. Kalkbrenner's epidemiology research does not involve a web lab, but instead involves national and international collaborations linking environmental and human health data sources. Her research investigates how environmental contaminants impact human health with a focus on autism. Despite their different research modalities, several themes connect EHS faculty: development, neurological outcomes, and of course a focus on how environmental contaminants influence human health.

Examples:
EHS research is directly tied to student instruction at three levels: 1. Doctoral students: All four faculty members are training doctoral students, where the students participate on a weekly basis in the research methodologies employed by the faculty member. For example, students will be coached, during one-on-one interactions, in water sampling, use of a flow cytometer or microscope, or in data linkage and analysis. Over the course of doctoral studies, students are supported in understanding how these skills can support their own unique dissertation research. 2. MPH students: All EHS faculty use examples directly from their ongoing research in classroom instruction. One notable example is that **Todd Miller**, PhD, uses his wide range of experience in

microbial and algal water contaminants when teaching PH741 – Environmental Public Health Microbiology. 3. Undergraduates: **Kurt Svoboda**, PhD, teaches a lab-based undergraduate course, PH346 Environmental Health and Disease, that relies on his expertise in toxicological research in relaying public health research concepts through hands-on lab demonstrations. Dr. Miller has worked with numerous undergraduate students in his lab.

Epidemiology

In Epidemiology, faculty research specializations are in the areas of social, community-based, life course, cancer epidemiology and advanced data analysis methods. Faculty have expertise in infectious disease, nutrition, breast cancer, health services, violence against women, mental health, structural determinants of health, science communication, and community-level interventions. Ongoing research examines health inequities; participatory interventions to address racial inequities in COVID-19; life course socio-cultural and nutritional risk factors for breast cancer; perinatal and global health; links between psychosocial stress, immune function and chronic disease; infodemic management; fetal programming of adult disease; mass criminalization and community health; the misuse of race as a genetic construct in epidemiologic research; and methodologies for studying gender, race, and social class inequities in health. Epidemiology faculty have collaborated with Indigenous nations, local governments, community organizations, community-based researchers, and health justice activists to foster population health and health equity.

Example:
Amanda Simanek, PhD, MPH, discusses examples of her research focused on studying the effects of socioeconomic disadvantage on health across the lifecourse and across generations in PH758/Social Epidemiology. In PH 868/Epidemiologic Links Between Infectious and Chronic Disease, she draws on her research to examine and discuss links between infectious and chronic diseases.

Public Health Policy and Administration (PHPA)

Public Health Policy and Administration is home to three faculty members with a shared focus on the social determinants of health and public health policy. Faculty have expertise in a broad range of topics including immigration, income inequality, political economy of health care systems, tobacco control, non-medical technologies, and residential segregation. Faculty members utilize qualitative, quantitative, and mixed methods approaches to research and regularly engage in interdisciplinary and cross-institutional collaborations. PHPA faculty have published their work in journals such as *Social Science & Medicine*, *Tobacco Control*, *Journal of Medical Internet Research*, *American Journal of Public Health*, and *American Journal of Epidemiology*.

Example #1
Mustafa Hussein, PhD, used examples from his RWJF-funded study of the effects of living wage policy and the NIH-funded project measuring financial risk from out-of-pocket spending for medical care and evaluating effects of Medicaid expansion and Marketplace plans introduced since 2014 by the Affordable Care Act (ACA) in his quantitative research methods for public health policy and administration course (PH 777).

Example #2
Linnea Laestadius, PhD, MPP, used examples of research documents from her NIH R21 grant on e-cigarettes in her qualitative methods course (PH 776).

Cross-Cutting Research Strengths

Another perspective Zilber School faculty bring to the instruction of students comes from cross-cutting interdisciplinary and transdisciplinary research, an essential public health approach for addressing complex and serious health problems. The Zilber School strives to serve as an

example of this type of collaboration within the University and with the community. Faculty collaborate with faculty on and off campus in a range of disciplines including economics, geography, and nursing. They also form partnerships with community practitioners. Students benefit from the multiple perspectives reflected in this research. A first step in this direction came in 2018 after our initial school accreditation. We competed for a CDC Prevention Research Center (PRC) within our school based on our cross-cutting strengths. Although this first attempt did not result in PRC funding, the application scored in a competitive range, and we will apply again during the 2023 grant cycle. Below, we list four cross-cutting research strengths that faculty have and will continue to integrate into their instruction of students.

One major strength emerging across programs is **women's and children's** health through the life course, including the prevention of prematurity and infant mortality and the promotion of maternal health in Milwaukee and Southeastern Wisconsin. For example, EHS faculty offer a perspective (Public Health Biology/Basic Science) that complements existing strengths in maternal and child health, epidemiology, community and behavioral health promotion, biostatistics, and policy among Zilber School faculty who are addressing women's, child, adolescent, and fatherhood health. In CBHP, the Adolescent Brain and Cognitive Development Study (ABCD) Milwaukee Site, funded by NIH (2017-2027), is an example of research in this area. Our 2018 CDC PRC application was based on the theme of women and children's health and brought together our strengths in this area.

Another of our primary strengths across programs is a focus on research to promote **health equity** and reduce **health disparities**, based on an explicit philosophy of social and environmental justice, which is tied to our mission. We seek to reduce the significant ethnic and economic-based health disparities that exist in Milwaukee. Many of our faculty members bring this orientation to their work, directly addressing health equity and health disparities in an applied manner that requires collaborations across programs. In addition to the PRC mentioned above, we can envision a federally funded center for health equity, beginning with a developmental center and evolving into a full center. Due to its extreme segregation and marked health disparities, Milwaukee is an ideal location in which to address this issue through community-engaged interdisciplinary research.

The school's Environmental Health Sciences Program illustrates the creative potential of cross-cutting collaboration. They recently submitted an interdisciplinary R01 application to NIH (June 2021 for the study of a novel **harmful algal toxin** that was recently discovered in Lake Superior. This toxin was initially discovered in Dr. Todd Miller's Laboratory of Aquatic Environmental Microbiology and Chemistry. The laboratory shared the novel toxin with Dr. Svoboda who discovered an astonishing neurotoxic potential. Dr. Laiosa's laboratory further demonstrated that the toxin negatively impacts differentiation of hematopoietic stem cells. Armed with these alarming preliminary findings, the team submitted a proposal to test the hypothesis that harmful algal blooms in new environments are producing uncharacterized novel toxins, which are anticipated to affect our freshwater resources and human health. If funded, these studies will provide research funding to support two RA positions, a shared post-doctoral fellow, and the three faculty members leading the investigation. The faculty team anticipates that as this research on the public health impacts of Great Lakes algal toxins moves forward, other expertise in environmental epidemiology, bioinformatics, and public health policy will need to be added to the research team.

Finally, the school's strength in **biostatistics and bioinformatics** is reflected in the participation of a Biostatistics Track faculty member on the Clinical and Translational Science Institute (CTSI) Site Team. He consults frequently for the CTSI and is engaged in several projects with scientists in the private and academic sectors.

4) Describe and provide three to five examples of student opportunities for involvement in faculty research and scholarly activities.

Doctoral students are expected to be heavily involved in research from the beginning of their time at the Zilber School. They are engaged in research through their faculty mentors, primarily working on faculty projects or in laboratories. Gradually, students' work progresses to their own projects as they develop their dissertation plans in conjunction with their mentors. Three doctoral students have applied for mentored NIH Pre-doctoral National Research Service Award (NRSA; F31) funding to support their dissertation projects. Doctoral students in CBHP (4), EHS (1), and EPI (1) have received campus Dissertation Research Awards.

Nine MPH students are employed as RAs on faculty research projects and some conduct research-based projects for their capstone class. These projects are advised by faculty and conducted in conjunction with community-based organizations. Graduate students have presented their work in collaboration with faculty at the conferences of the American Public Health Association and Wisconsin Public Health Association, as well as at other more specialized conferences such as the Society of Toxicology, the Society for Epidemiological Research (SER), and the International Society of Environmental Epidemiology (ISEE). When appropriate to their level of contribution, students are included as authors on publications and frequently serve as first authors on their dissertation publications. For example, a faculty member in Epidemiology is working with a recent PhD graduate on a manuscript from the dissertation.

The Zilber School has participated in a collaborative Student Health Research Symposium with the other Partners for Health Schools (Nursing, Health Sciences, and Social Welfare) in 2018 (5/4/18), 2019 (5/3/19) and 2021 (5/2-7/21). The symposium was not held in 2020 due to the coronavirus pandemic and restarted in 2021 as a virtual event. Each year, 60-70 students have presented work with a faculty mentor at this symposium, which is open to the campus community. Students are also encouraged to present this work at regional and national conferences.

Zilber School students have regularly presented at the symposium. For example, in 2018, an MPH student in the EHS Track gave a podium presentation titled "Water Quality Indicators of Sixteen Milwaukee Water Bodies: The Role of Urbanization on Water Health" in collaboration with an EHS Track faculty member. In 2019, a CBHP doctoral student did a poster titled "Menstrual Activism on YouTube: a Netnography of Three Alternative Period Products" with a PHPA Track faculty member. Finally, in 2021, an undergraduate student worked with a Biostatistics Track faculty member on a presentation titled "Systematical Assessment of Rare Variant Association Tests via Simulations."

A complement to the graduate student involvement has been work by several faculty with undergraduate and high school students. Dr. Todd Miller regularly and successfully engages and trains undergraduate students in his lab in the KIRC and with the buoy projects on Lakes Winnebago and Michigan. Two BSPH students are currently working with Dr. Paul Florsheim on his parenting project, and two faculty are working with undergraduate students outside Zilber School interested in public health research through UWM's Support for Undergraduate Research Fellowship Program (SURF).

Here are five examples of student involvement in faculty research projects.
Example #1
Paul Florsheim, PhD has two funded research projects that involve students.

1. Project Title: Preparing for Parenthood: Father Inclusive Prenatal Care (FIPC) Study
   Collaborating Organizations: Erie Family Health Center (Chicago, IL), Rush University (Chicago, IL), The Center for Urban Population Health (Aurora Health Care, UW-Madison School of Medicine and Public Health, UWM)
   Funding: US DHHS Administration for Children and Families, 2020-2025

In collaboration with Dr. Wrenetha Julion at Rush University and the Erie Family Health Center in Chicago, Dr. Florsheim is testing the Father Inclusive Prenatal Care (FIPC) model to prepare young men for parenting. The FIPC model is designed to support the development of coparenting relations and fathering skills as part of routine prenatal healthcare (Florsheim & Moore, 2020). The project is being implemented through a large multi-site healthcare center in Chicago that is well positioned to engage young fathers through their prenatal clinics. This grant is supported with funding from the Administration for Children and Families and currently employs a PhD student and an MPH alum.

2. Project Title: Parents Empowering Parents (PEP) Study
   Collaborating Organizations: The Parenting Network
   Funding: Wisconsin Partnership Program, 2019-2024

In collaboration with The Parenting Network, a local community-based not-for-profit, this project uses a multilevel approach to engage parents in family support and parenting education activities in neighborhoods with high rates of child abuse reports. The goals of the project are to reduce child abuse and family separations. If successful, the approach will help diminish racial/ethnic health disparities in child welfare involvement. This project is supported by a grant from the Wisconsin Partnership Program to UWM and The Parenting Network. Two BSPH students are currently supported with university funds to assist with the implementation of this project.

Example #2
Amy Kalkbrenner, PhD, MPH, conducted an invited systematic review on air pollution and neurodevelopment. An MPH alumna (EPI 2017) who wanted to keep her research skills current participated in this project by screening titles, abstracts, and full texts and will be a co-author on the manuscript that is in preparation.

Example #3
Michael Laiosa, PhD, is training a doctoral student in his lab whose research interests align with the lab's work on the effect of environmental contaminants on hematopoietic stem cells. The goal of the research is to assess how in utero exposure to environmental contaminants impact development and function of the immune system across the life course. These highly mechanistic toxicology studies provide a biological context for larger social and environmental justice issues such as pre-term low birth weight, infant mortality, and childhood immune diseases.

Example #4
Mustafa Hussein, PhD, had two MPH students as research assistants on funded projects. One MPH student, who also supported Professor Hussein's research as an alumna, worked on an RWJF-funded study of the effects of living wage policy. The second MPH student worked on an NIH-funded project measuring financial risk from out-of-pocket spending for medical care and evaluating effects of Medicaid expansion and Marketplace plans introduced since 2014 by the Affordable Care Act (ACA).

Example #5
Linnea Laestadius, PhD, MPP, conducted research on how two contraceptive methods, oral contraceptive pill and intrauterine devices (IUDs), differ in portrayal, information framing, engagement, and health equity information on Pinterest with an MPH student for her Capstone project in spring 2021.

5) Describe the role of research and scholarly activity in decisions about faculty advancement.

The Zilber School has defined expectations related to research and scholarly activity in its promotion policies. Research and scholarly activity is a critical component to faculty advancement. As stated in the Criteria for Promotion Policy (11/4/14, p. 1), for promotion to Associate Professor, the EC applies this criterion: "Scholarship will be judged by its level of productivity, potential to improve the public health and impact on public health. Quantity of publication by itself is not necessarily a metric of quality. Each candidate must demonstrate that s/he has continued to grow as an independent scholar as evidenced by the development of a significant, high-quality, independent program of public health research and scholarship. The research program should be well-conceived and developed, with evidence of work at all stages of the knowledge production process (e.g., publications, submitted manuscripts, draft manuscripts, conference presentations, collected data sets, intra- and/or extramural funding, submitted grants, etc.). The candidate should be moving toward forming a positive national reputation, with recognition and prominence appropriate to his/her level."

The Criteria and Procedure for Appointment or Promotion to Full Professor policy (modified 9/9/20, pp. 2-3) describes the school's expectations for promotion to Full Professor. The policy states, "National recognition of expertise and achievement is expected for candidates seeking the rank of Professor. This might be reflected by, but not limited to, combinations of the following: federal grants; appointment to editorial boards or major journals; invitation to present at national/international meetings and/or chair sessions; invited chapters in important scholarly books; service on grant review panels; high citation frequencies; regular publication of important articles in major journals; and positive external impartial review letters." See ERF E4 for these policies.

6) Select at least three of the measures that are meaningful to the school and demonstrate its success in research and scholarly activities. Provide a target for each measure and data from the last three years in the format of Template E4-1. In addition to at least three from the list in the criteria, the school may add measures that are significant to its own mission and context.

Table E4-1 below presents data for seven indicators that demonstrate success in research and scholarly activities. Among these are percent of faculty participating in research activities (with external funding; R1.1), number of grant proposal submissions (R1.3), total research funding (R1.2), percent of faculty with publications (including numbers; R2.2), and percent of faculty presenting (including numbers; R2. 1). Overall, the faculty are performing well in research and scholarly activities, a measure of their commitment to improving health of communities and advancing health equity. Indeed, the number of proposals increased by five to 52 in 2019 from 47 in 2018. In the past three years, over three-quarters of the faculty, meanwhile, published at least one article in peer-reviewed journals. The loss of faculty over the last couple of years has affected the school's capacity to achieve the targets for grant proposals submitted and total research expenditures. In addition, the pandemic disrupted opportunities in 2020/2021 for presentations at professional scientific meetings as well as faculty's ability to submit grant proposals and receive new awards.

Table E4-1 Outcome Measures for Faculty Research and Scholarly Activities				
Research Goal R1. Conduct relevant, rigorous and collaborative research that advances public health knowledge and promotes population health and health equity.				
Outcome Measure	**Target**	**2018-19**	**2019-20**	**2020-21**
R1.1. Percent of faculty with external funding (Calendar years 2018, 2019, 2020)	60%	77% (20/26)	79% (19/24)	89% (17/19)
R1.2. Percent of faculty submitting proposals for external funding (Calendar years 2018, 2019, 2020)	75%	85% (22/26)	88% (21/24)	74% (14/19)
R1.3. Number of grant proposals submitted annually	25	47	52	25
R1.4. Amount of total research expenditures from external research grants[1]	$1.5 million dollars	$1.41 million	$1.47 million	$1.07 million
Research Goal R2. Disseminate and translate research findings to influence the development of health- and equity-promoting policies and strategies.				
Outcome Measure	**Target**	**2018-19**	**2019-20**	**2020-21**
R2.1. Percent of faculty presenting at professional scientific meeting annually (# of presentations 2018=52; 2019=47; 2020=26)	75%	77%	64%	37%
R2.2. Percent of faculty publishing in peer-reviewed journals annually (at least 1 article annually) (# of publications 2018=86;2019=93;2020 = 64)	75%	81%	84%	84%
R2.3. Percent of PhD students presenting at a professional scientific meeting by the time of the dissertation defense	100%	--[2]	(100% (2)	100% (4)

[1]The source of data for research grant expenditures is the Office of Research dashboard. The data presented here vary from the data derived from WISER, the source used to report the school's financial data in Table C1-1. It is rare to have the opportunity presented by this self-study process to compare data systems across the Office of Financial Planning & Analysis and the Office of Research.
[2]No PhD students defended their dissertations in this year.

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

Strengths

- Ten successful tenure promotions (rigor of publications/journals)
- Over three-quarters of faculty have external research funding
- Over three-quarters of faculty have published in peer-reviewed journals
- Doctoral students are successful presenting by the time of the dissertation defense
- Shared Office for Administration of Research (SOAR) collaboration with the College of Health Sciences, College of Nursing, and Helen Bader School of Social Welfare is strengthening research support infrastructure
- Zilber School has 4th highest level of research expenditures among UWM schools and colleges over past 10 years, including Letters and Sciences

Challenges

- Decreased infrastructure support at the school and university levels due to budget cuts by the state
- Growing RA support for doctoral students in tight funding environment
- Difficulty in collecting data on research productivity from all faculty in a uniform format (Healthy Wisconsin Partnership Program grants, for example)
- Pandemic and recent loss of faculty combined with hiring freeze affecting research productivity in number of proposals submitted, percent of faculty presenting

Plan

- Continue to offer writing, review, and other support services to faculty to enhance success rate on grant submissions
- Develop an online data entry system to track all metrics for research productivity based on the annual Faculty Performance Survey
- Generate revenue to support RA positions for doctoral students; for example, goals to increase number of grants submitted over time and to pursue funding options with donors.

E5. Faculty Extramural Service

The school defines expectations regarding faculty extramural service activity. Participation in internal university committees is not within the definition of this section. Service as described here refers to contributions of professional expertise to the community, including professional practice. It is an explicit activity undertaken for the benefit of the greater society, over and beyond what is accomplished through instruction and research.

As many faculty as possible are actively engaged with the community through communication, collaboration, consultation, provision of technical assistance and other means of sharing the school's professional knowledge and skills. While these activities may generate revenue, the value of faculty service is not measured in financial terms.

1) **Describe the school's definition and expectations regarding faculty extramural service activity. Explain how these relate/compare to university definitions and expectations.**

   Providing service is part of the University of Wisconsin culture, expressed by the Wisconsin Idea philosophy, "The boundaries of the institution are the boundaries of the state." As an urban school located in the heart of a rust-belt city on a Great Lake, the Zilber School of Public Health (Zilber School) has been publicly charged to help address public health issues, such as infant mortality, gun violence, and environmental health disparities. Since 2015, UW-Milwaukee (UWM) has received the Community Engagement classification from the Carnegie Foundation, further emphasizing the campus commitment to community engagement and service. The Zilber School reiterated the commitment by placing community engagement directly in its Mission Statement (*The mission of the University of Wisconsin-Milwaukee Joseph J. Zilber School of Public Health is to advance population health, health equity, and social and environmental justice among diverse communities in Milwaukee, the state of Wisconsin, and beyond through education, research, community engagement, and advocacy for health-promoting policies and strategies*.).

   The Zilber School defines faculty extramural service as faculty involvement both in professional associations and community and governmental organizations. Based on the school's Workload Policy (See ERF E5), service counts for one of eight units in the faculty's annual workload, which translates to 12.5% effort. In addition to professional and community organizations, the Policy includes school and university service. Examples of professional associations with which faculty are involved include the Society for Epidemiological Research, the Interdisciplinary Association for Population Health Sciences, and the Wisconsin Public Health Research Network. Examples of community or governmental organizations include the WI Division of Public Health Pregnancy Risk Assessment Monitoring System (PRAMS) Advisory Committee, Jump at the Sun Consulting, City of Milwaukee Tobacco-Free Alliance, and the City of Milwaukee Health Department Environmental Health Advisory Board.

   As presented in the indicator below (See Table E5.5), the Zilber School expects that all faculty will be engaged in extramural service. Not only is extramural service through professional service and community engagement an integral part of the school mission but also it is an important dimension in the promotion and tenure process.

2) **Describe available university and school support for extramural service activities.**

   The school's three-course teaching load is intended to support not only research but also service as commensurate with faculty in public health. The workload is differentiated for teaching, research, and service to provide faculty more time for research as well as service based on their interests and goals. Furthermore, extramural service is an integral part of both the campus and Zilber School missions. The Carnegie Foundation recognized UWM with its Community Engagement Classification. The Center for Community-based Learning, Leadership, and Research is one resource for faculty interested in developing a service-learning component in their courses. While extramural service is an expectation for faculty promotion, the Zilber School

supports faculty in community-engaged work with students and other resources. For example, the school granted a course reduction to the faculty member who was a founder of the Dear Pandemic blog. During the pandemic, this faculty member has had 87 contacts with a variety of media to disseminate information about COVID-19. She was both a media contact for UWM and engaged in service to the public health community. In an example of professional service, the Zilber School supports faculty and staff participation in ASPPH annual and section meetings.

3) **Describe and provide three to five examples of faculty extramural service activities and how faculty integrate service experiences into their instruction of students.**

Example #1
Several faculty share their experiences related to the city, state and national response to the COVID-19 pandemic with their students. Among the settings where they served are the Milwaukee County Unified Emergency Operations Center Epi Intelligence Group, Community Resilience Response Team, and the Future Operations Team. **Mustafa Hussein**, PhD, served on the Elmbrook School District's Medical Advisory Board during the 2020-21 school year. The Board received the District's Golden Apple Award for Excellence in Volunteering.

Example #2
Lorraine Halinka Malcoe, PhD, MPH, used examples of advocacy work regarding COVID-19 and prisoners in PH 202 Public Health Dilemmas II. Students reviewed an affidavit titled *Public Health Declaration to Protect Incarcerated Persons, Correctional Staff, and Wisconsin Communities from COVID-19* that Drs. Halinka Malcoe and Amanda Simanek wrote in April 2020 and revised in September 2020. Dr. Halinka Malcoe worked with students to break down the various advocacy arguments and recommendations made in the Declaration and the types of evidence used to support each argument/recommendation. The April declaration was used for advocacy by public defenders throughout Wisconsin and by the American Civil Liberties Union of Wisconsin to advocate on behalf of prisoners who were being impacted by COVID-19, particularly those with underlying health conditions. The first declaration was part of an ACLU lawsuit on behalf of Wisconsin prisoners. Drs. Halinka Malcoe and Simanek also participated in numerous media interviews re: the Declaration and were panelists on an ACLU virtual webinar. The revised declaration was used by public defenders and private bar attorneys doing early release advocacy.

*Example #*3
Amanda Simanek, Ph.D., MPH, has served as one of UWM's designated media experts on COVID-19 throughout the pandemic. This has resulted in close to 100 science communication outreaches to date across a broad range of local media (Wisconsin Public Radio, WUWM, Milwaukee Journal Sentinel and National media outlets (MSNBC, NY-Times, The Atlantic, The Guardian, Washington Post etc.). Dr Simanek is also a co-founder of a highly trafficked blog entitled: "Dear Pandemic" that translates information on the pandemic in short digestible information nuggets that are utilized both by the general public and media ecosystem.

Example #4
Amy Kalkbrenner, MPH, PhD, created the wecountcovid19 survey for symptom tracking by zip code to assist health officials in the city to visualize patterns in the distribution of symptoms and to increase awareness among residents about the importance of public health measures such as social distancing. Her writing also appeared in local newspapers, and she was interviewed on TV and radio.

4) **Describe and provide three to five examples of student opportunities for involvement in faculty extramural service.**

Faculty have created opportunities to expand instruction for doctoral students through extramural service. For instance, **Dr. Auer**, one of the school's Biostatistics Professors, regularly invites his PhD students to assist him in manuscript review for professional journals. These students gain

the experience of carefully reviewing and submitting a critique and work with Dr. Auer closely to refine their comments. Dr. Auer has worked with several journals to ensure that this arrangement is allowable and that students receive partial credit for the review.

Dr. Amy Kalkbrenner has also involved doctoral students in performing invited manuscript peer reviews with permission of the journal. She invites a student with a specific research interest related to a given manuscript to participate in this process. This learning experience helps to shift the student's focus to the qualities of writing, valid analysis, and interpretation that make a publication an important contribution to improving the public's health, ultimately improving the doctoral student's research and manuscript preparation. In the past two years Dr. Kalkbrenner has coached four student-led manuscript reviews.

Dr. Amanda Simanek worked with one of our Epidemiology MPH students, Tanya Bohacheff, who is providing news and information about the Covid-19 pandemic to the ZSPH website. Ms. Bohacheff curated the information, and Dr. Simanek provided feedback prior to the information or news link being posted to the school's website.

Integrating students into faculty extramural service during the pandemic has been challenging. In-person events have been limited, and attendance at others has been quite small. In addition, faculty have had to adjust their own schedules based on other responsibilities.

5) **Select at least three of the indicators that are meaningful to the school and relate to service. Describe the school's approach and progress over the last three years for each of the chosen indicators. In addition to at least three from the list in the criteria, the school may add indicators that are significant to its own mission and context.**

For its service indicators, the Zilber School chose measures related to faculty participation in extramural service and curriculum. Faculty have consistently contributed to the community and profession both locally and nationally. The outcomes in 2018-19 and 2019-20 likely resulted from lack of clarity in these questions in the Faculty Performance Survey, and the survey was streamlined in 2020. The two curriculum measures, meanwhile, reveal the faculty's commitment to engaging with the community in different ways through their courses. Following the Field Experience, students appreciate the richness of interacting with organizations on a specific project for the Capstone, and their faculty advisors provide key support in facilitating these projects. In addition, certain courses have provided opportunities to integrate practice and theory in meaningful ways.

E5-5: Outcome Measures for Faculty Extramural Service				
Community Engagement /Service Goal CE/S1. Engage with public health practitioners, policy stakeholders, and community partners through a variety of approaches to improve population health and health equity.				
Outcome Measure	**Target**	**2018-19**	**2019-20**	**2020-21**
CE/S1.1 Faculty participating in at least one extramural service activity	**100%** faculty participating in extramural service activities annually	95%	96%	100%
CE/S1.3 Faculty-Student service collaborations on Capstone Projects conducted with community partner	**50%** of Capstone projects conducted with community partner annually	50% (9/18)	54% (18/33)	55% (16/29)

E5-5: Outcome Measures for Faculty Extramural Service				
Community Engagement /Service Goal CE/S1. Engage with public health practitioners, policy stakeholders, and community partners through a variety of approaches to improve population health and health equity.				
Outcome Measure	**Target**	**2018-19**	**2019-20**	**2020-21**
CE/S1.4 MPH Courses with community-based service projects	**3** MPH courses with community-based projects	4*	4**	1***

* Example: PH 779/Public Health Policymaking and Policy Analysis – community project with American Lung Association
**Example: PH 779/Public Health Policymaking and Policy Analysis – community project with Community Advocates Public Policy Institute
***Examples: no community project in PH 779/Public Health Policymaking and Policy Analysis due to the pandemic (other courses affected as well due to remote learning environment); PH 826/Principles of Community Intervention Research – volunteering with local agency or non-profit

6) Describe the role of service in decisions about faculty advancement.

The tenure and promotion process takes into consideration faculty contributions in three areas: research, teaching and service. Service is an important part of tenure and promotion at the Zilber School. While the school Criteria for Promotion Policy does address service, there are few structures, policies, and procedures that define and support faculty community-engaged service. In terms of workload, service counts as one unit in the academic year. Faculty are expected to engage in service activities both with professional associations and in the broader community, and they must clearly document these activities in their annual review and tenure documents and present their contribution to service to the school and campus community. The language that follows from the Criteria for Promotion Policy illustrates this expectation. “Service: Service is defined as those activities that support the purpose and functioning of the ZSPH, UWM, professional societies and associations, and the field or profession. Each candidate for promotion must demonstrate that s/he has become a responsible and contributing member of the University/academic community as well as of the community at large and the profession. Research: The Executive Committee recognizes that research and scholarship, in addition to traditional definitions, also include the generation of new knowledge through the synthesis of prior knowledge and translation of knowledge into recommendations for policies or programs to improve the public’s health, and translation of research discoveries into public health interventions and community action.” The CE/S1.1 indicator for participation by faculty in extramural service activity (target = 100%) underscores the importance of service in faculty promotion.

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

Strengths

- Campus designation with Community Engagement Classification by Carnegie Foundation since 2015
- Faculty and PHSA engagement in community activities
- Faculty and student commitment to working with community-based organizations through research and course work
- Expectation of service in faculty tenure and promotion process

Challenges

- Developing a coordinated system for tracking and review of faculty, staff and student engagement activities
- Developing school infrastructure for community engagement

Plan

- Implement tracking/review process of community-engaged activities (data collection to include other examples of service to be in line with tenure documentation)

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 (e.g., community advisory board, alumni association, etc.). List members and/or officers as applicable, with their credentials and professional affiliations.**

The Zilber School's formal structure for constituent input is the Community Advisory Board (CAB). Following several meetings in 2015 to redefine the focus and membership, the CAB was re-established in fall 2016 with representatives from 15 agencies. The CAB met six times between 2016 and 2019 (9/14/16, 3/31/17, 11/10/17, 9/28/18, 3/29/19, 11/11/19). The meeting scheduled for 5/1/20 was cancelled due to the COVID-19 pandemic. The CAB met most recently on 6/29/21 and 10/22/21 and is scheduled to meet in March 2022. Meetings for the rest of AY 2022-23 will be scheduled in the spring.

The CAB's charge is to advise the Zilber School on curriculum, recruitment, and workforce development to "assure the commitment to the mission and values to advance health equity and social and environmental justice." See ERF F1.1 for the draft revised Charge statement. Looking back at 2019, CAB members provided valuable feedback on the new leadership course (covering the leadership, negotiation, and interprofessional practice competencies) and workforce development (3/29/19). Other topics included the On Public Health series at the November 2019 meeting. The Zilber School also shared flyers for school events in September (research seminar on structural and social determinants of dietary behaviors in Black women) and November (Lead in Milwaukee, as part of On Public Health series). However, the challenges and demands of COVID-19 pandemic affected members' ability to participate. The school convened no meetings during 2020, and the momentum of engagement was altered. With the gap in meetings, the CAB has experienced change. In past year during the pandemic, three organizations named new representatives, and new agencies were invited. Table F1.1 lists the 10 current members.

Table F1.1 Joseph J. Zilber School of Public Health Community Advisory Board, 2021-2022

CAB Member	Title/Email Address	Agency
Barbara Beckert, MA	Milwaukee Office Director barbara.beckert@drwi.org	Disability Rights Wisconsin
Gerry Coon, PhD	President & CEO gcoon@diverseandresilient.org	Diverse and Resilient
Niki Espy, BA (6/15/21)	Associate Program Director Nespy@nh-milw.org	Neighborhood House
Joe'Mar Hooper, MPA (6/3/21)	Executive Director joemar@safesound.org	Safe & Sound
Kirsten Johnson, MPH, CHES, CPH (4/7/21)	Health Commissioner krjohns@milwaukee.gov	Milwaukee Health Department
Rosamaria Martinez, MBA, RD, CLC	Vice President of Community Health Initiatives rosamaria.martinez@sschc.org	Sixteenth Street Community Health Centers
Patricia McManus, PhD, RN	President and CEO pmcmanus@bhcw.org	Black Health Coalition of Wisconsin

Table F1.1 Joseph J. Zilber School of Public Health Community Advisory Board, 2021-2022		
CAB Member	**Title/Email Address**	**Agency**
Dawn Mumaw, LCSW, SAC	Director, Southeastern Region dawnm.mumaw@dhs.wisconsin.gov	Wisconsin DPH-Southeastern Regional Office
Justin Rivas, MPH, MIPA (5/17/21)	Community Health Initiatives Director jtapper@wi.rr.com	Milwaukee Health Care Partnership
Azure'De (DeDe) Williams, BS	Executive Director awilliams@milahec.org	Milwaukee Area Health Education Center

The Zilber School staff highlighted specific questions on the agendas for the June and October 2021 meetings, and the CAB members provided valuable input related to the school's vision, workforce development, On Public Health events, and new Field Experience partnerships. One outcome was a revised draft Charge. See ERF F1.1 for the revised draft CAB charge. See F1.2 for notes from CAB meetings.

2) **Describe how the school engages external constituents in regular assessment of the content and currency of public health curricula and their relevance to current practice and future directions.**

The CAB provides input on future directions in public health practice that affect the content and currency of the school curriculum. For example, at the 6/29/21 meeting, the members highlighted action for racial equity and anti-racist praxis as important areas for education and training. See ERF F1.2 for CAB meeting notes. While some courses in all degree levels already incorporate these areas, this point underscores the importance of reviewing extra-curricular opportunities as well as planning additional events related to racial equity and anti-racist praxis.

In addition to engaging the CAB in curriculum competencies and content, the Zilber School also connects with the Field Experience site preceptors at two points. The preceptors' complete evaluations to assess attainment of their students' project competencies. The Director of Accreditation Assessment and Community Engagement and the Community Engagement Coordinator review these evaluations. They draw on this feedback to highlight aspects of the Field Experience during Orientation and the required workshop in the semester preceding the Field Experience. For example, preceptors often mention the importance of students taking initiative on their projects, and staff have underscored this trait in their presentations. As part of the plan to institute a formal review process for the preceptor evaluations, the GPC decided at its 9/14/21 meeting that the Evaluation Workgroup would present these data to the GPC. The Evaluation Workgroup will discuss Field Experience preceptor evaluation data at its March 2022 meeting.

The Zilber School regularly convenes the Field Experience preceptors at an annual recognition event. These events provide an opportunity for networking with each other, appreciation of their contributions to the MPH Program, and feedback on the Field Experience course. The preceptors also share their perspectives on competencies and skills for public health practice. The Dean, MPH Director, and Community Engagement staff plan these events, which have been held on 6/8/2017, 6/6/2018, 6/4/2019, and 6/30/21. No event was scheduled in 2020 due to the pandemic, as most of the preceptors are involved in the COVID-19 response.

In recent events with the preceptors, they have emphasized the importance of leadership. For example, at the 6/4/2019 meeting, preceptors cited leadership as a key area of currency for the MPH curriculum, particularly in the context of student leadership on their projects. In June 2021, preceptors highlighted project management, including planning, implementation, and evaluation,

as well as long-term strategic planning. They also underscored the importance of students being able to design education materials for communication with a range of audiences using different media.

Finally, the Zilber School and the City of Milwaukee Health Department (MHD) are in the process re-establishing the more formal partnership. While students have been engaged in Field Experience and Capstone projects with MHD staff, more formal interactions were put hold during leadership changes at MHD and the COVID-19 pandemic. Some MHD offices will be moving back into the Zilber School building in The Pabst Brewery. MHD is renewing its commitment to the Academic Health Department model, and the school and health department leaders have discussed issues related to the curriculum and the Field Experience and Capstone courses, as well as research and grants in key areas of mutual interest to meet changing public health practice needs. See ERF F1.2 for notes from the 6/29/21 meeting to explore areas for cooperation.

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

Development of the Zilber School's vision, mission, and goals occurred in two stages. In spring 2015 the school held two visioning sessions which included discussion of the school's mission. Field Experience preceptors and adjunct faculty contributed to these sessions as well as participated on the Mission and Goals Workgroup that convened later that spring. In fall 2019 Zilber School faculty approved the vision (*A just, equitable, healthy future for people, communities, and the environment in Milwaukee, the state of Wisconsin, and beyond*). Due to the gap in CAB meetings, the CAB provided input on the vision at the 6/29/21 meeting. CAB members considered the question, "What strategies could the school use to make the vision and mission a reality in the community?" and in their discussion, they focused on recruiting a diverse student body. They thought that framing public health as a vehicle for social justice would help prospective students to engage with the curriculum. CAB members also recommended highlighting opportunities for leadership development in addition to research. Finally, CAB members proposed sharing information widely about scholarships and creating marketing materials to reach a range of audiences, especially including queer young people of color.

b) Development of the self-study document

Due to the pandemic, the school had limited participation from external partners. Two alumni who were preceptors served on the Curriculum Workgroup. Another preceptor who served as adjunct faculty in spring and fall 2019 and fall 2020 was also on the Curriculum Workgroup. In addition, an alumna served on the Students Workgroup.

PHGSA student leaders, alumni and employers also contributed to the Self-Study. PHGSA leaders met with the Director of Accreditation Assessment to talk about Criterion F2/Student Engagement and provided feedback on drafts of Criterion F2. The Alumni shared feedback about their ability to perform in their positions following graduation. A small sample of employers, meanwhile, provided feedback about graduates' preparation for their positions and perspectives on changing practice needs.

College of Nursing staff contributed their time as well. One staff member worked on the formatting, while the Assistant Dean for Students Services coordinated work on Criterion H/Students.

c) Assessment of changing practice and research needs

At their June 2021 meetings, both the CAB and preceptors offered input on changing practice needs. For CAB members, an emphasis on racial equity and anti-racist praxis was particularly important. For Field Experience preceptors, thinking about workforce development more generally, especially in light of the volatile political climate local and state public health professionals have faced over the past year and a half, Public Health 3.0 emerged as an important reference point. This framework is relevant for the school's MPH curriculum given the focus on the seven practices for the community health strategist, including real-time data analysis and interpretation, collaboration between clinical and public health fields, and partnerships at the local, state, and federal levels with a range of sectors.

For preceptors, expectations for students beginning their Field Experiences and entering as new employees included conducting data analysis, distilling/synthesizing information, expressing opposing perspectives, and identifying the best communication strategies for diverse audiences. They also mentioned project management. In effect, they highlighted long-standing practice needs for the current public health workforce. In addition, they stressed certain aspects of professionalism, such as initiative, flexibility, independence, and respect for diverse workgroups. See ERF F1.4 for notes from the June 2021 CAB and Preceptors meetings.

d) **Assessment of school graduates' ability to perform competencies in an employment setting**

The Zilber School has little experience with formal collection of employer data. Asking alumni for employer information has yielded only limited information. While other resources including the UWM Alumni Office, LinkedIn, and information from faculty and current and former students have been helpful, Student Services and Community Engagement staff have been challenged to maintain a comprehensive data base for alumni and employers, with the pandemic further complicating this work. Through connections with preceptors, some of whom also employ current students and alumni, staff have learned informally about employers' perceptions of the school's graduates. The Evaluation Workgroup has discussed data collection strategies including interviews and focus groups. The Workgroup will finalize the process and timeline in spring 2022 and implement a plan beginning in 2022-23.

At the same time, in light of the self-study process, the school decided in August 2021 to conduct survey interviews with some employers. The Accreditation Assessment Director identified four supervisors whose alumni employees provided contact information in a recent Alumni Survey and six other employers using a convenience sample to balance the different tracks and graduation years. The Director also included employers who had hired more than one Zilber School graduate. In total the Director invited 10 employers to participate in a brief individual Teams interview. Among the organizations invited were two non-profits, five local health departments, two academic institution departments, and one hospital system.

The interview questions were drawn from other schools of public health employer surveys. Among the questions were:

- How would you rate their overall preparation for the position (using a scale of 1 to 7, where 1 is Very Well Prepared and 7 is Not at all Prepared)?
- What are areas for improvement for Zilber School MPH Program graduates?
- What changes do you see in public health practice and research needs that the Zilber School should keep in mind related to curriculum?

Interviews took place between 8/9/21 and 8/23/21 and lasted about a half hour.

Of the 10 employers invited to participate, seven participated in the interviews for a response rate of 70%. Organizations came from the non-profit (2), governmental public health (4), and academic sectors (1). Overall, the employers were very positive about the graduates' preparation for the public health workforce. Five of the seven employers ranked the graduates Very Well Prepared (1) or Well Prepared (2) on a 7-point Likert Scale (71%). For the two employers who responded with Prepared (3), the explanation was that the graduates needed to grow in some areas related to technical and management skills and professionalism. Among the competency domains cited as the graduates' greatest strengths were Evidence-based approaches, Planning and Management, and Communication. Other strengths cited included computer, synthesizing, and critical thinking skills. Areas for improvement that employers mentioned were being confident speaking up in different situations, having experiences to be comfortable connecting with a range of partners, and writing. Specific examples related to writing focused on communicating data and core concepts, engaging diverse audiences on electronic platforms, and engaging diverse audiences for action and change.

The employers interviewed also shared their perspectives on important domains and skills for graduates to have and changing practice needs for the school to think about relative to the MPH curriculum. For top domains, employers ranked communication, leadership, evidence-based approaches, planning and management, and systems thinking as being important. For top skills, employers ranked initiative, passion, project management including facilitation, attitude, and systems thinking as especially important.

For changing practice needs, these employers ranked grounding in social justice and health equity, systems thinking, advocacy, community organizing, data visualization, and program evaluation and grant writing as being important considerations for the MPH curriculum. Regarding leadership, one employer noted that students would benefit from learning how to engage one-to-one to build relationships and from assessing their own leadership skills and passions. Another employer discussed the importance of new ways of thinking. For example, what might Public Health 4.0 look like? Where else can public health be involved? See ERF F1.4 for a copy of the employer interview questions and a summary of results.

The school recognizes that the data from this August 2021 employer survey have some limitations. Since the sample was not drawn from a comprehensive listing of employers, and the interviews were conducted at one point in time instead of across multiple time periods, the data may not represent employers' general experience with the alumni over time. To the extent that these data have usefulness for the school, they offer context for anecdotal stories faculty and staff hear. Overall, the feedback about graduates' preparation for employment was positive. In addition, ideas for areas of improvement for our graduates (writing, confidence speaking up, partnership development, project management) are consistent both with our experience and that of our colleagues nationally. Writing especially is an area that faculty have addressed on different occasions, most recently during discussions about the Capstone (May and August 2021). Faculty may consider this topic further in conversations about the MPH Capstone and core 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.

See ERF F1.4 for: 1) F1.3.c (Assessment of Changing Practice and Research Needs) – CAB and Preceptor meeting notes and a summary from the employer interviews; and 2) F1.3.d

(Assessment of school graduates' ability to perform competencies in an employment setting) – Employer Survey interview questions and results summary.

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

Strengths

- Core group of partners committed to the Community Advisory Board (CAB)
- Strong support from preceptors for the Field Experience course
- Positive feedback regarding graduates' ability to perform competencies in August 2021 Employer Survey

Challenges

- Developing a coordinated system for tracking and review of external partners, faculty, staff and student engagement activities
- Incorporating feedback from the Community Advisory Board at the Dean, faculty, and committee levels
- Clarifying expectations of and sustaining participation from the CAB given COVID-19 pandemic, with no meetings in 2020
- Re-establishing formal partnership with the City of Milwaukee Health Department
- Limited approach to the 2021 Employer Survey

Plan

- Implement tracking/review process of community involvement activities (data collection to include other examples of service to be in line with tenure documentation)
- Sustain and maintain CAB participation, including sharing feedback with the Faculty Council for consideration in improvement activities related to the curriculum, recruitment, and workforce development
- Sustain regular interaction with the Field Experience preceptors
- Identify and implement specific projects with MHD
- Implement new plan and timeline for Employer Survey with Evaluation Workgroup

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.**

   Students are introduced to service, community engagement, and professional development through several different mechanisms. Faculty and staff describe service, community engagement, and professional development activities and opportunities to incoming students during the fall Orientation. Faculty share opportunities in their courses and with their advisees. Academic staff include campus and community volunteer service opportunities in the Student Newsletter, which is disseminated monthly to all current students and alumni. Finally, all students are members of the Public Health Student Association (PHSA; named changed from Public Health Graduate Student Association [PHGSA] in spring 2021 to include the BSPH students).

   At the fall Orientation, faculty and staff highlight key features of the MPH Field Experience and Capstone courses. The Field Experience is the practice placement of mutual benefit to organizations and students alike, and students learn about community engagement in the context of their projects through observation and specific activities. For their Capstone projects, students are encouraged to engage with a community partner on a project that the student guides.

   Students are also introduced to PHSA during Orientation. The current officers describe possible service activities, such as neighborhood clean-up events, as well as highlight school committee student representative and PHSA officer positions to be filled. Students are encouraged to come to monthly meetings and get involved in the different events. During AY 2020-21, these meetings were virtual. UWM has formally recognized the Zilber School Public Health Graduate Student Association (PHGSA) as a student organization since 2011. In the spring semester of each year the current officers file paperwork to continue the work with new officers for the coming academic year. PHGSA is connected to a faculty advisor by the Faculty Chair. The 2020-21 student officers completed this process early in the fall semester, including the name change to PHSA. An interim faculty advisor was named, as the previous advisor left the school in January 2021. The plan is to name a faculty advisor in the spring semester who will continue for AY 2022-23.

   While the PHGSA has a faculty advisor, the students had no physical space in the school. In 2019 the Dean designated space on the third floor. Students have access to coffee and printing as well as a place to meet. The PHGSA team also created a site for materials in Canvas to have key documents in one place and provide all students access to resources. In addition to Canvas, the team uses PHGSA Facebook and Twitter accounts to share event announcements and resources.

2) **Provide examples of professional and community service opportunities in which public health students have participated in the last three years.**

   Faculty in some courses encourage student engagement in professional and community service through volunteer opportunities, advocacy, and other learning and practice experiences. Several of these opportunities are part of the curriculum, while other opportunities are shared with students. The PHGSA also creates opportunities for students to volunteer in community service. Finally, students both volunteered and served in paid positions during the COVID-19 pandemic. Each of these avenues is discussed below.

Curriculum
Examples of courses with community engagement include PH 800/Capstone in Public Health, PH 826/Principles of Community Intervention Research, and PH 831/Community Engagement and Participatory Research Approaches in Public Health. In the PH 800 Capstone course, students are encouraged to conduct their projects with a community organization, with the faculty advisor providing support and data analysis assistance as needed. Examples of community partners for the Capstone projects include the Wisconsin Alliance for Women's Health, City of Milwaukee Health Department, Wauwatosa Health Department, Cudahy Health Department, Children's Wisconsin, Advocate Aurora Health, Foundation for Black Women's Wellness, and the Milwaukee County Office of Emergency Management.

In the PH 826 course, students volunteer or work with a local non-profit throughout the semester.

In the PH 831 course, students have advocated on health equity issues with state legislature. One topic focused on access to menstrual products.

PHGSA (PHSA, 2021)
Over the past five years students have organized a variety of community, professional and school activities. Examples include:

~ Food/clothing drives (fall 2016, spring 2018)
~ Lunch and Learn sessions (resumes/cover letters, fall 2017; interviewing, spring 2018)
~ Documentary screenings (*13th*, spring 2017; *53206*, spring 2018; and *Hoan Alone*, spring 2019)
~ Research seminar with Michael Laiosa, EHS faculty (National Public Health Week, 2019)
~ Healthy lunches (National Public Health Week, 2017 and 2019)
~ School social hours (fall 2016, 2017, and 2018; spring 2018)
~ Sweatshirt sales (fall 2019, 2020, and 2021)
~ Neighborhood clean-ups & leaf raking (2 in fall 2020,1 in fall 2021)
~ Speakers (3 in spring 2021)

PHGSA service and professional events planned each semester depend on current elected leadership and PHGSA participation. Student time commitments vary with the cycle of incoming and graduating students. In addition, the COVID-19 pandemic meant that PHGSA altered its programming. They canceled events planned for spring 2020 National Public Health Week and held the three spring 2021 speaker events virtually.

Examples of PHGSA activities in 2020-21 and fall 2021 include speakers with a focus on racism and equity, the Peer Mentor Program, creation of an online hangout space, and neighborhood clean-up events.

<u>Speakers</u>

- 2/1/21: Reggie Jackson, Co-Owner and Lead Trainer, Nurturing Diversity Partners; *The Hidden Impact of Segregation* (32 participants)
- 3/29/21: Lucy Mkandawire Valhmu, PhD, RN, Associate Professor, College of Nursing; *The Role of Gender Equity in Global Health* (21 participants)
- 4/26/21: Anika Wilson, PhD, Associate Professor and Chair, College of Letters and Science, African and Diaspora Studies; *Folklore and Public Health: A Conversation about Integrating Cultural Diversity in Global Public Health Practices (*10 participants)

<u>Peer Mentor Program</u>
An undergraduate student organized the Zilber Partnership Program to connect undergraduate and graduate students for professional development. Twenty (20) pairs/groups participated during 2020-21, and the Peer Mentor Program continues in AY 2021-22 with 21 people involved.

Discord
At the beginning of the spring 2021 semester, PHGSA Board established Discord, a hangout space for undergraduates, MPH, and doctoral students. About 32 students participated regularly in chatrooms about various aspects of student life at the Zilber School.

Neighborhood Clean-ups
PHGSA organized two neighborhood clean-ups in fall 2020. On 10/3/20, eight students participated in the clean-up in the Hillside neighborhood around the Zilber School. On 11/7/20, five students participated in the clean-up around the School of Freshwater Sciences campus on the city's south side.

Leaf Raking
PHSA joined in the campus Make a Difference Day on 11/6/21 with leaf raking at the home of an older adult in the city. Three students, a guest, and the interim Faculty Advisor participated.

Distraction Kits
PHSA hosted an event on 12/7/21 to make distraction kits for survivors of sexual assault and domestic violence at the Advocate Aurora Healing and Advocacy Services. Four students participated, with the interim Faculty Advisor joining later for a social time.

COVID-19 Pandemic
In response to the COVID-19 pandemic, many graduate students responded to calls from county local health departments for volunteers for contact tracing and vaccine clinics. From May 2020 to May 2021, a doctoral student served as Case Manager for contact tracing. Another doctoral student, who is the Health Officer in one of the Milwaukee County local health departments, is the lead for a countywide Epidemiology Intelligence Team. He often appeared on the local television news to share important updates about COVID-19 trends, prevention measures, and specific response actions. Several MPH students filled positions with area local health departments. Five local health departments had about 20 students volunteering or working with them. In some cases, these students also did their Field Experience projects in the context of their COVID-19 work, taking on surveys and data analysis. In addition, two doctoral students worked with the Wisconsin Department of Health Services.

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

Strengths
- Core group of students (5-10) connected for cross-track collaboration through the PHGSA; opportunity for students to build bridges
- Designated PHGSA/PHSA meeting space on third floor
- Peer Program connecting undergrads and graduate students; showing opportunities for continuing education and creating pipeline to MPH Program
- Engagement of students in COVID response (contract tracing, data analysis, vaccine clinics)
- Strong student interest in engagement opportunities through volunteer work, courses, Capstone, and other events

Challenges
- Limited opportunities during the pandemic for direct student engagement
- Limited participation in PHGSA/PHSA among students; many students working and adjusting to the rigorous course load
- Physical location on two campuses – Kenwood Campus for undergrads and The [Pabst] Brewery for graduate students; limited transportation options
- Difficulty in planning activities a year ahead to meet campus requirements for student association grants for speakers and travel to conferences (hard to know what activities /

opportunities might develop in following semesters; students required to attend training in the fall semester). Also, modification in grant process not well communicated by campus.
- Limited connections for students with small grassroots agencies for Field Experience and Capstone
- Disconnect between PHSA and faculty

Plan

- Change name from PHGSA to PHSA – Public Health Student Association – to reflect all degree levels in the school
- Continue PHSA Peer Mentor Program
- Organize informal social gatherings and other events (for example, tours of Zilber School building) when in-person activities resume
- Discuss possibility of financial support for PHSA from Zilber School given challenges with campus requirements and deadlines (e.g., support for lunches at certain events as campus student association grants cannot be used for food)
- Promote opportunities for networking among faculty and PHSA; connections to volunteer service opportunities, increased awareness of each group's activities (explore different options for PHSA, faculty, and staff to meet together periodically)
- Discuss possibility of program expectations for student service

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.

The Zilber School has defined three primary professional development communities of interest. These communities include the Milwaukee area, the state of Wisconsin, and the statewide maternal and child health workforce. These choices reflect the school's mission of commitment to advancing health equity and social and environmental justice in Milwaukee and the state of Wisconsin. The City of Milwaukee and surrounding area are the primary target audiences for "On Public Health," an offering of panels and presentations throughout the academic year. Topics are determined based on current events and media coverage of timely issues in Milwaukee as well as informal conversations between faculty, staff, and city public health leaders. Recent topics include water, housing, violence, lead, and COVID-19.

Turning to statewide professional development, the school participates in education activities and events with its academic and professional association partners and the Wisconsin Division of Public Health (DPH) Office of Policy and Practice Alignment (OPPA). The rationale for this choice is support of the Wisconsin Public Health Association (WPHA), Wisconsin Association of Local Health Department and Boards (WALHDAB), and the state health department's workforce continuing education goals, which are intended for broad representation from a diverse mix of organizational settings. At the Zilber School, we participate in the annual WPHA/WALHDAB Conference, including serving on the Annual Conference Planning Committee, co-sponsoring the Poster Reception, and supporting students to present their Capstone posters at the WPHA/WALHDAB Poster Reception. This conference's target audience is the governmental and non-governmental public health workforce Conference topics are informed by participants as well as by the state's Healthiest Wisconsin 2020 Plan. The state's 2030 assessment and improvement planning process is underway and now delayed by the pandemic.

Finally, in response to needs identified by the Maternal and Child Health (MCH) Programs at the state and City of Milwaukee Health Departments, the MPH Director, also a CBHP faculty member with expertise and training in Maternal and Child Health, applied for and received a HRSA Track 2 MCH Catalyst Program funding in 2020 to create training and a MCH student interest group at the Zilber School of Public Health.

Much of Wisconsin's public health workforce is eligible to retire, and this workforce is limited in diversity. Given the racial disparities in Milwaukee related to birth outcomes, housing, food security, and incarceration of African American males, having a diverse workforce is especially important for building trust and increasing access. The proposal for an initial MCH graduate certificate was developed and approved by Zilber School faculty and UWM committees in Spring 2020. The graduate certificate started in Fall 2021. The certificate is available to students from multiple departments on campus who have a bachelor's degree and interest in MCH. The MCH Certificate also seeks to increase the number of underrepresented students of color in the MCH profession by creating a pipeline for students that links them to the MPH program and/or employment in the field. In addition, the certificate seeks to increase training and skills in MCH for working professionals who seek additional skills or opportunities to enroll into graduate school. A secondary goal of the MCH training is to assess feasibility of an MCH concentration or degree offering at the school in the fourth and fifth year of the grant in preparation for submission to HRSA for the next MCH training funding cycle

Still another workforce development opportunity is the graduate Interprofessional Public and Population Health Certificate. A partnership between the College of Health Sciences, College of Nursing, and the Zilber School, the Certificate is 16 credits, with two courses coming from each of the three Partners in Health units. The Certificate is open to students in other UWM programs as well as

professionals in the field. Marketing resources have been limited, and no one from Milwaukee has applied. Three students completed the Certificate between 2019-2021, and one student is currently enrolled. Two students are expected to begin in spring 2022.

2) Describe how the school periodically assesses the professional development needs of its priority community or communities, and provide summary results of these assessments. Describe how often assessment occurs

For the broader public health workforce, this section presents details about two needs assessments conducted by the academic public health programs and their practice partners. For the HRSA MCH Track Catalyst Certificate, the faculty PI drew on available data to provide rationale for the new training program to diversify that workforce.

BROAD PUBLIC HEALTH WORKFORCE

In response to CEPH's *2016 Accreditation Criteria*, the state's academic partners drew on long-standing relationships to form the Wisconsin Public Health Education and Training Program (WiCPHET) Academic Programs Council in 2018. See ERF F3.2 for an overview of WiCPHET. Among the academic partners are:

~ Carroll University, Bachelor's Program in Public Health
~ Medical College of Wisconsin, Institute for Health and Equity Master of Public Health Program
~ University of Wisconsin-La Crosse, Department of Health Education and Health Promotion
~ University of Wisconsin-Madison, Master of Public Health Program
~ University of Wisconsin-Milwaukee, Joseph J. Zilber School of Public Health

In addition to these academic partners, the Council includes WPHA, WALHDAB, and WI OPPA. The primary goals of the WiCPHET Academic Program Council are to assess Wisconsin's public health workforce professional development needs and to contribute to and develop collaborative training opportunities for the public health workforce. The Council's plan is to conduct the workforce development needs assessment every two years. Council members have long participated in the educational programming for the annual WPHA/WALHDAB Annual Conference (May) and Public Health in Practice Conference (August).

2018 Needs Assessment

The Process

The WiCPHET Academic Council partners have conducted two needs assessments. The first needs assessment occurred from February to August 2018. Due to the COVID-19 pandemic, the second needs assessment was delayed a year to 2021. In the first needs assessment, the WiCPHET Academic Programs Council conducted a series of conversations using a modified nominal group technique. Participants included the WPHA and WALHDAB Boards of Directors, the statewide Public Health Council, the WPHA Early Career Professionals Section, and front-line practitioners attending the WPHA Public Health in Practice Conference. The Council partners targeted the WPHA and WALHDAB associations because their memberships reflect broad representation of governmental and non-governmental as well as early career and seasoned public health practitioners. A total of 84 people participated as shown in Table F3.2 below.

Table F3.2.1		
Needs Assessment Participants by Organization		
Organization Participants	**Date of Meeting**	**Number in Attendance**
WALHDAB (Board Meeting)	April 13, 2018	15
WPHA (Board Meeting)	April 20, 2018	10
WPHA Early Career Professionals (Conference Section Meeting)	May 22, 2018	21
Wisconsin Public Health Council (Quarterly meeting)	June 1, 2018	13
WPHA Public Health in Practice Participants (Pre-conference session)	July 31, 2018	25
Total		**84**

Of the five needs assessments conversations, Council partners facilitated sessions during three regularly scheduled board meetings and at two pre-conference meetings. Each session began with the following question: *Based on the realm of your public health practice, what do you see as the top continuing educational needs of the public health workforce?* Participants followed this modified nominal group process:

- Participants first wrote down their response(s) to the key question and then provided their answers in a round-robin fashion.
- WiCPHET Council facilitators recorded participants' responses as they went around the room on flip chart sheets that corresponded with each of the eight CEPH Foundational Competency domains.
- Participants then discussed the topics on the flip chart sheets, combining similar topics and adding any additional topics.

Following the discussion, participants ranked workforce development topics using five dots to select their priority domains. Participants were also asked to answer the following questions in writing on handouts that were provided:

1. How do you think these needs can/should be addressed?
2. What are the barriers or impediments to obtaining continuing education?
3. What are the actual or potential resources needed to facilitate continuing education?

Finally, WiCPHET Council facilitators asked participants to provide feedback about the needs assessment process.

Data Analysis

In September and October 2018, Council partners turned to data analysis and report writing. They compiled summaries of responses from each meeting and provided written reports with initial results to each of the participant groups. See ERF F3.2 for the group summaries. For the analysis, Council partners used a weighted ranking to determine the priority domains. As Table F3.2.2 illustrates, leadership emerged as the most important domain. Evidenced-based approaches and communication rounded out the top three priorities.

Table F3.2.2
Priority Foundational Competency Domains by Rank
Weighted Rank
Leadership **(35.5)**
Evidence-based approaches to Public Health **(32)**
Communication **(30.5)**
Systems Thinking **(27.5)**
Planning and Management to Promote Health **(26.5)**
Other **(22)**
Policy in Public Health **(19)**
PH and HC Systems **(18.5)**
Interprofessional Practice **(13.5)**

Themes from Priority Domains Question

WiCPHET Council partners chose the top five domains to determine the educational programming that would be provided by the WiCPHET Academic Council. The Council also plans to co-sponsor and provide at least one workforce development training annually in conjunction with WPHA and WALHDAB. See ERF F3.2 for the full 2018 Needs Assessment Report. These themes are discussed below.

Leadership. Overall, participants expressed the need to provide education, training, and mentorship to public health practitioners early in their careers to help to grow the next generation of public health leaders. Specifically, several groups identified change leadership, change management, and strategic planning as key areas for growth. Our participants also mentioned several populations within the public health practice community who would benefit from focused leadership training. These groups include women, racially and ethnically diverse, community-based, and young leaders. Other specific topics mentioned included negotiation and collaboration, being politically savvy, influencing without direct authority, and facilitation skills.

Evidence-based Approaches to Public Health. The groups we facilitated expressed a need for understanding the basics of evidence-based approaches to public health (EBPH). Among the topics identified were knowing the background for EBPH, assessing community readiness for EBPH, applying EBPH, and communicating EBPH to community/lay audiences. Participants also mentioned the need for additional skills in basic epidemiology and data analysis. One group identified the need for understanding theory-based model driven approaches to public health practice, while another group cited trauma-informed care as an emerging issue.

Communication. The responses for the communication domain across the five groups were quite broad. One major theme was the ability to analyze data and translate data to a variety of audiences including policy makers, the general public, those with low health literacy, and those who speak languages other than English. Several groups also noted the need for increased skills in marketing and messaging. Specific topics related to this theme included developing strategic communication, providing uniform definitions, simplifying messages, declaring values in messaging, having training in different media approaches. One group expressed the need for training in the development of basic public health materials for citizens and elected/appointed boards.

Systems-Thinking. The participant groups had a wide array of responses for the systems-thinking domain. The groups identified the themes of aligning priorities across systems, defining population health, improving understanding of the local public health system, and infusing systems-thinking into daily practice. Addressing social determinants of health in the existing public health system structure and health equity were also key themes. At least two groups mentioned the need for general training in systems-thinking as well as public health modernization and adaptability to keep public health staff current.

Planning and Management to Promote Health. A major theme in this domain related to aspects of the community health improvement process, including how to do the planning process, how to interpret findings, and how to use a uniform set of tools. Participants also mentioned skills in community engagement and cultural competency as important to have. Finally, participants across the groups identified an array of project management skills, including quality improvement and performance measures, analysis of big data, grant writing, and financial planning and budgeting.

Themes from Continuing Education Questions

Participants provided many useful recommendations for the ways in which continuing professional development should be provided.

Delivery of Continuing Education. Participants identified local and regional opportunities for ongoing education as being important. Peer-to-peer learning emerged as a key way to deliver content, and participants cited access to archives of webinars and other trainings as an important resource. They also recommended development of communities of practice.

Barriers to Obtaining Continuing Education. Across all groups, time and money were cited as the major barriers to obtaining continuing education. Public health organizations in Wisconsin and across the country are under-funded and under-staffed. As a result, organizational leaders have limited resources to support travel and time away from the office to attend trainings.

Resources Needed to Obtain Continuing Education. Participants offered a wide array of ideas and suggestions to enhance continuing professional education for the public health workforce through the enhancement of resources. One interesting suggestion was for the educational programs in the state to provide sponsorship for public health practitioners to attend ongoing training and education. Suggested funding opportunities included grants, scholarships, and other forms of financial support. Online training seemed to be a preferred method, especially for those in rural areas. Improving internet access to rural areas was also a general theme.

The WiCPHET Academic Council had several opportunities to share the 2018 needs assessment process and findings. They participated in poster sessions at the 2021 WPHA/WALHDAB Annual Conference and the 2021 Public Health in Practice Conference. The 2020 poster presentation at the ASPPH Annual Meeting was canceled.

2021 Needs Assessment

The WiCPHET Academic Council conducted the 2020 needs assessment in Spring 2021. To broaden the diversity of perspectives in the responses, the Council expanded the number of groups from five to 11. Council members identified the additional entities based on existing relationships and new initiatives related to racial and health equity. Participants in the needs assessment came from the following associations/entities:

~ AHEC Regional Offices staff and Board of Directors
~ Community Health Worker Coalition (including WPHA CHW Section)
~ Governor's Health Equity Council (created 3/19/19)
~ WALHDAB Board and membership
~ Wisconsin Local and Tribal Health Departments
~ Wisconsin Division of Public Health Regional Office Representatives
~ Wisconsin Primary Health Care Association Members
~ Wisconsin Public Health Council
~ WPHA Board and membership
~ WPHA Early Career Professionals Section
~ WPHA Racial Equity Committee

Since board meetings and conferences were still being conducted virtually, Council partners decided to conduct a survey. The survey was derived from the main question asked in 2018 (*Based on the realm of your public health practice, what do you see as the top continuing educational needs of the*

public health workforce?), and participants were also asked to list their top three priority continuing education needs based on their responses.

Methods
The needs assessment survey was built in Qualtrics early in 2021 and administered by the UW-Madison MPH Program. The eight domains comprising the CEPH 22 Foundational Competencies used in the 2018 need assessment for the modified nominal group process formed the questions, and participants were asked in a separate question to identify the top needs from their experience among the individual competencies in each domain. The survey also included the questions about delivery of, barriers to, and resources for continuing education. An additional question asked participants to share ideas about delivery of continuing education during the pandemic. A final question invited participants to share any additional thoughts/comments. Reports for data analysis were generated from Qualtrics and from a content analysis of the question with the top three priorities.

Data Collection
UW-Madison MPH Program staff coordinated with WPHA and the individual entities for distributing the survey via newsletters and listservs. Council members prepared a cover email explaining the purpose of the survey and inviting participation based on their roles as leaders in their respective sectors. The survey was open from 2/4/21 through 3/5/21, and participants received three reminder emails sent through the respective organization listservs.

Results
A total of 133 public health professionals responded to the 2021 needs assessment survey. Unfortunately, due to a complication in creating and editing the survey, the demographic questions were omitted, and Council partners were not able to describe how many among the different groups participated or to calculate a meaningful response rate.

Survey results were analyzed in two ways. In the first analysis, Council members ranked the competency domains based on participants' top three priorities. Table F3.2.3 presents the 2021 weighted ranking of the domains in comparison to the 2018 needs assessment results.

Table F3-2.3 Needs Assessment Priority Domains – Weighted Rankings, 2018 and 2021

Weighted Rankings – 2021	Weighted Rankings – 2018
Planning & Management: **56**	Leadership: **35.5**
Communication: **51**	Evidence-based approaches to PH: **32**
Evidence-based Approaches to PH: **39**	Communication: **30.5**
Public Health & Health Care Systems: **36**	Systems Thinking: **27.5**
Policy in Public Health: **30**	Planning & Management: **26.5**
Leadership: **9**	Policy in Public Health: **19**
Systems Thinking: **5**	Public Health & Health Care Systems: **18.5**
Interprofessional Practice: **4**	Interprofessional Practice: **4**

In the second analysis, Council members identified the top three competencies from CEPH's set of 22 Foundational Competencies using a weighted ranking approach. The top three are:

- Communication Domain – #18: Select communication strategies for different audiences and sectors (32)
- Public Health & Health Care Systems Domain – #6: Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to enhancing health equity at organizational, community, and societal levels
- Planning & Management to Promote Health Domain – #8: Apply awareness of cultural values and practices to the design or implementation of public health policies or programs

Discussion
While Communication and Evidence-based Approaches to Public Health remained in the top three from 2018 to 2021, in reverse order, Planning and Management to Promote Health emerged as the top priority in the 2021 Needs Assessment. With Communication a close second, a likely explanation is the work required in the local and state governmental public health sector during the COVID-19 pandemic. Public health professionals were focused on contact tracing and vaccine administration, both activities that require considerable planning and coordination among a range of partners. The nature of public health practice over the past year and half also explains the ranking of 36 for Public Health and Health Care Systems, as public health, primary care and hospitals needed to coordinate their priorities and activities to share scarce resources and ensure communication across multiple platforms. Although the leadership domain ranked sixth in 2021, compared to first in 2018, leadership itself would of course be an integral part of the top three domains in 2021.

The findings for the top three competencies reflect the turbulent times both of the murder of George Floyd and the Black Lives Matter movement and the COVID-19 pandemic. How we communicate to whom and how we act to achieve racial equity are important issues at all levels among the public health workforce as well as at the organizational, community and societal levels. The WiCPHET Council will use these results in planning continuing education opportunities at the statewide conferences and in other settings in 2022.
education opportunities at the statewide conferences and in other settings in 2022.

MATERNAL AND CHILD HEALTH (MCH) WORKFORCE
For the MCH Catalyst Training Program, the faculty PI drew on national and state data to provide rationale for the new training program to diversify the MCH workforce. In particular, ASTHO had earlier projected that about 250,000 public health workers will be needed by 2020. Similarly in Wisconsin, the 2011 Workforce Report indicated that the proportion of public health workers in the Division of Public Health eligible for retirement ranged from 41% in 2010 to 55% in 2015. The public health workforce was elderly, with about 1 in 3 workers eligible for retirement in 2011. Similar trends are evident in MCH workforce. According to national data, less than 10% of the MCH workforce is less than 30 years of age. The MCH workforce also has a high turnover rate of 28% compared to 20% in nursing and 16% for teachers.

Another important indicator is the significant lack of diversity in the public health workforce. In Wisconsin, 90% of the Division of Public Health workforce is white. Only 5% of the workforce is black, 3% is Asian, 2% is Hispanic, and 1% is American Indian. The lack of diversity is particularly noticeable in public health managerial and leadership roles. The workforce retirement and lack of diversity projections have been further exacerbated by the Covid 19 pandemic. In particular, the vitriol against public health professionals and resistance to public health measures in many states have contributed to more public health workers retiring or switching to other professions.

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

Strengths
- Strong relationships among the WiCPHET Academic Programs Council (academic public health programs), WPHA, WALHDAB, and the WI Department of Health Services, Division of Public Health Office of Policy and Practice Alignment for the planned biennial needs assessment
- Ongoing relationships with local (City of Milwaukee Health Department, Sixteenth Street Community Health Centers), state (WI DPH Title V MCH Program), regional (University of Illinois at Chicago School of Public Health Center of Excellence in Maternal and Child Health), and national (HRSA Maternal and Child Health Bureau) partners for the MCH Certificate
- Plan for biennial public health workforce needs assessment in place

Challenges

- Improving quality of biennial public health workforce needs assessment survey and sustaining evaluation processes
- Engaging faculty in public health workforce professional development needs assessment
- Identifying role for Community Advisory Board (CAB) members in public health workforce development
- Enrolling diverse student population in the graduate Interprofessional Public and Population Health and MCH Certificates
- Limited scholarships and other financial aid for underrepresented students of color
- Limited diversity of underrepresented professionals in the workforce, which limits student's exposure and engagement with diverse professionals during their training and
- Coordinating marketing efforts across Partners for Health units for the Interprofessional Public and Population Health Certificate

Plan

- Continue collaboration with WiCPHET Academic Programs Council and practice partners for the workforce development needs assessment
- Continue planning continuing education opportunities with WiCPHET Academic Programs Council and other partners based on needs assessment results
- Present update to faculty in AY 2021-22 regarding local and state professional development for public health workforce (continuing education opportunities and MCH Certificate)
- Develop continuing education programs with interested doctoral students
- Develop continuing education programs with input from CAB members

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.**

The Zilber School employs different approaches for developing and implementing professional development activities at the local and state levels. For the "On Public Health" series at the local level, the Research Seminars / On Public Health Committee solicits input from faculty and staff. Committee members also draw on relationships with community partners, and faculty may suggest a colleague planning to come to Milwaukee. For example, an EHS faculty member had connected with the featured speaker at the November 2019 lead panel (see F4.2 below) and invited him to Milwaukee. The panel was one of the events in which he participated. New this year are two continuing education events coordinated and delivered by doctoral students as part of the On Public Health series. The students chose topics related to current events including contact tracing and telehealth emerging from the COVID-19 pandemic. CAB members also provide input on topics for On Public Health. For example, at the 6/29/21 meeting, they proposed six topics, including housing, incarceration, and dental access. See ERF F1.2 for the meeting notes.

For the statewide continuing education activities, the WiCPHET Academic Partners Council interacts regularly with the practice partners to plan new events and opportunities. Breakout sessions for the two WPHA/WALHDAB conferences are determined based on results from the needs assessment. For example, the WiCPHET partners presented a breakout session on leadership and communication at the 2019 Annual Conference (5/22/19) as well as coordinated leadership topics based on the 2018 needs assessment with the keynote speaker at the Public Health in Practice Conference (8/7/19). More recently, the partners delivered a two-part breakout session for the 2021 Public Health in Practice Conference on Public Health 3.0 and the community health strategist. In these sessions, a total of 42 participants applied data collection and communications skills in small group discussions using a food insecurity case scenario. The summer 2018 podcast series titled Elevating your Leadership Skills was designed to highlight findings related to leadership as well as support the state DPH OPPA's priority on the community health strategist role in governmental public health. The Council plans another podcast series in 2022, drawing on the 2021 Needs Assessment results for the topic.

Another resource at the state level is the WiCPHET website hosted by the UW-Madison MPH Program. Initially funded as a Public Health Training Center in during 2010-14, WiCPHET developed a series of courses with the other academic and practice partners based on a needs assessment conducted in 2012. For example, faculty at the Zilber School created two courses, one on social justice and the other on adolescent health. Now WiCPHET has a series of continuing education modules on health equity, including five Social Justice modules adapted from the Zilber School social justice course, population health, and professionalism that are available for the state's public health workforce. The Zilber School website provides a link to the WiCPHET home page on its Workforce Development page in the About tab.

A related professional development resource linked through the WiCPHET from the Zilber School Workforce Development page is the Region V Public Health Training Center (PHTC) housed at the University of Michigan School of Public Health. With funding from the federal Health Resources and Services Administration (HRSA), the University of Michigan coordinates the Region V Great Lakes Public Health Training Collaborative and works with the national Public Health Learning Network. Areas of expertise for this region include behavioral health, rural health,

tribal health, and health equity. Among the Region V community-based training partners is the University of Wisconsin Madison Population Health Institute through their Health Equity Practice Initiatives.

For the MCH Certificate, the HRSA Catalyst grant faculty PI drew on connections at the state and local health departments as well as on campus to help inform curriculum development. Current Zilber School doctoral students also voiced their opinions. One area that emerged as a priority area across all the stakeholders was children with special health care needs, and the Certificate includes a required three-credit course titled Overview of Programs, Policies, and Interprofessional Service for Children with Special Health Care Needs (PH 730).

In addition to the school's approaches to professional development, faculty also engage in separate professional development activities. While faculty have not been involved in the WiCPHET needs assessments described in F3 above, their engagement in the translation of needs assessment findings is usually connected to needs identified by the agency or association extending an invitation for a specific keynote presentation or training. Here are seven examples of faculty participation in professional development activities.

2018 and 2019
Paul Florsheim was invited by the Peru National Institute of Mental Health (PNIMH) to conduct trainings on the Young Parenthood Program (YPP) because the PNIMH was interested in implementing programs to prevent domestic violence in young families.

2020
Paul Florsheim was invited to conduct YPP workshops at the Postpartum Support International (PSI) Conference and the Wisconsin Association for Perinatal Care Conference. Both organizations are interested in ways to promote father involvement in perinatal care.

Lorraine Halinka Malcoe delivered the keynote address, "Essential actions to address the opioid crisis: A case study in public health" to the Wisconsin Health Science Educators Association. [Online conference; November 13, 2020; ~25 participants]. Dr. Halinka Malcoe selected the topic after discussion with one of the BSPH Academic Advisors and conference organizers. Association members wanted to learn more about public health and be able to use the keynote PowerPoint slides in the high school classroom to teach students about public health and what careers in the field might involve.

2021
Paul Florsheim was invited to present his YPP research at an international symposium on fathering programs at the American Psychological Association Conference. In collaboration with UWM School of Continuing Education, Dr. Florsheim recently created an online training course for agencies interested in delivering YPP through prenatal care services.

Amy Harley was an invited panelist for UWM's Picture a Scientist sponsored by the Divisions of Academic Affairs and Global Inclusion and Engagement on 4/16/21. The event focused on advancing diversity and inclusion in STEM, and 26 people participated.

Linnea Laestadius was an invited speaker at the Tobacco Retailer and Community Education event ["The Tobacco Retail Environment in Milwaukee"; June 24, 2021] sponsored by the City of Milwaukee Tobacco Free Alliance, Wisconsin African American Tobacco Prevention Network, Hispanic Latino Tobacco Prevention Network of Wisconsin, and Wisconsin Tobacco Prevention and Poverty Network.

Emmanuel Ngui is a faculty collaborator with the Medical College of Wisconsin in an NCI-funded 8-week summer Student-centered Pipeline Training to Advance Research in Cancer Careers (SPARCC) Program. The goal of this program is to increase diversity and link students to biomedical and public health graduate training and then careers in those fields. He has provided

training workshops on public health, health equity and social determinants of health to about 18 SPARCC scholars annually (latest training: June 23, 20221; 18 SPARCC Scholars).

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).

The Zilber School contributes to workforce development at the individual faculty/staff and school levels. Faculty and staff have participated in education/training activities in response to community-identified needs. See examples of faculty presentations/trainings above in F4.1. In another example, the Director of Accreditation Assessment and Community Engagement has served as instructor in two Community Health Workers training programs offered by the Milwaukee Area Health Education Center (AHEC; 5/3/19, 9 participants; 11/19/19, 12 participants). In addition, the Director of Accreditation Assessment and Community Engagement represents the Zilber School on the WiCPHET Academic Partners Council and participated in the Public Health in Practice Conference held on 8/10-11/2021 as described below in Example 1.

Example 1:
The WiCPHET Academic Programs Council partners conducted a two-part breakout session titled *Public Health Practice in the 21st Century Parts 1 and 2* on 8/10/21. The framework for the sessions was Public Health 3.0 and the Community Health Strategist, with the themes of leadership, data collection and analysis, and communication linked both to the seven practices of the Health Strategist and the 2018 and 2021 needs assessments results. Part 1 focused on collecting data, while Part 2 focused on communicating data. The sessions began with an overview of Public Health 3.0 and the Community Health Strategist, and the Council facilitator presented a food insecurity case in a Spanish-speaking migrant workers population. In three small groups facilitated by two Council partners, participants discussed the question, "*How will you collect data regarding the issue at hand in a culturally congruent manner using an equity lens*?" In the wrap-up with the whole group, participants and facilitators shared key points about partnerships and data collection strategies to build trust and identified health literacy as an important question for Part 2. Thirty-four (**34**) people attended this session.

Council partners used the same approach for Part 2. Twelve (**12**) people attended this session, including four who had been in the first session. The whole group discussed the question, "*How will you communicate findings based upon the data using an equity lens to have a positive impact on the issue at hand*?" Participants from rural and urban areas in the state shared communication strategies that had been successful in their communities, including storytelling, infographics, and trusted "messengers." Facilitators and participants appreciated the opportunity for shared learning.

The school usually offers two *On Public Health* events each academic year, and two examples are presented below. Table F4.2 below presents additional information on panels held between 2018 and 2021.

Example 2:
In 2019 lead was an important topic in Milwaukee. The Lead Prevention Program at the City of Milwaukee Health Department was criticized for mismanagement and gaps in services for families whose children had elevated blood lead levels. Under new leadership, the Program was reorganized and underwent an audit. In this context, community members and partners expressed a lot of concern about solutions, and a panel hosted at the Zilber School provided an important forum for sharing information. As it turned out, the panel included a lead expert visiting Milwaukee. Held on 11/18/19, the panel was titled "Lead in Milwaukee: A Community-wide Response," and **28** people attended. People benefited from the open dialogue, and community members had an opportunity to ask questions. The panelists are listed below:

- *Helen Meier*, PhD, MPH, *Moderator;* Assistant Professor, UWM Zilber School of Public Health
- *Bruce Lanphear*, MD, MPH; Professor, Physician, and Expert on Lead, Simon Fraser University, Canada
- *Delores Green*, BS; Executive Director, Renew Environmental Public Health Advocates (REPHA)
- *Jamie Ferschinger*, MS; Director of Environmental Health, Sixteenth Street Community Health Centers
- *Ofelia Mondragon*, BA; Home Environmental Health Manager, City of Milwaukee Health Department

Example 3:
By early 2020, the seriousness of COVID-19 was already evident, and anti-Asian sentiment was also raising concerns about discrimination and equity matters. A faculty member proposed an *On Public Health* session to inform community members about what we knew and what we should be considering. With input and legwork from the Research Seminars / On Public Health Committee, the panel, titled "Novel Coronavirus – 2019 (COVID-19): What We Know and What We Need to Consider," convened on 2/26/20. There were **43** people in attendance, including local providers, senior housing facility staff, and representatives from non-profit organizations. The panelists are listed below:

Alice Yan, PhD, Moderator; Associate Professor, UWM Zilber School of Public Health
Julie Bonner, MD; Campus Health Officer, UMW Norris Health Center
Julie Katrichis, MSN, RN, CNL; Director, Clinical Operations, City of Milwaukee Health Department
Sylvia Munoz-Price, MD, PhD; Enterprise Epidemiologist, Professor of Medicine, Division of Infectious Diseases, Froedtert and the Medical College of Wisconsin

Table F4.2 presents information for four additional continuing education panels/workshops. The session held on 8/3/21 was the first of two continuing education sessions planned and led by doctoral students in the CBHP Track. The second session, to be held in the spring, will address telehealth. See ERF F4.2 for sample flyers announcing the COVID-19 2020 and 2021 panels.

Table F4.2		
On Public Health Sessions		
Date	**Title and Panelists**	**Attendance**
April 12, 2018	Housing as a Public Health Issue; hosted with Ex-Fabula (Milwaukee Storytelling Collective)	94
December 3, 2020	*How is the UWM community handling COVID-19?* Panelists: • Carrie Fleider, MSW, LCSW; Director, University Counseling Services • Adam Jussel, J.D.; Dean of Students • Mai Yer Ying, MS; Director, Inclusive Excellence Center • Michael Gonzalez, MPH, PhD Student - Environmental Health Sciences; Treasurer, PHGSA • Gaëlle Sehi, 2nd year MPH student; President, PHGSA	18

Table F4.2		
On Public Health Sessions		
Date	**Title and Panelists**	**Attendance**
March 10, 2021	*COVID-19 Vaccination – American Minority History* (with Inclusive Excellence Center and Black Student Cultural Center) Panelists: Kevin Izard, MD; Paladina Health Gina Green-Harris, MBA; Director, UW-Madison SMPH Center for Community Engagement and Health Partnerships Dona Yahola, Intensive Case Manager, Gerald Ignace Indian Health Center	145
August 3, 2021 (Doctoral student lead)	*Putting Contact Tracing in Context: COVID-19 and the 10 Essential Public Health Services* Panelists: Maren Hawkins, BA, PhD Candidate, UWM Zilber School of Public Health Chris Rasch, BA; Director, Strategic Partnerships and Gov't Relations, Sixteenth Street Community Health Centers Jonathan Sancen, Parkway Clinic Manager, Sixteenth Street Community Health Centers	15

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

Strengths

- Strong connections to WPHA, WALHDAB, WI DPH OPPA, state academic public health programs
- Development of MCH Certificate
- Partnership with CHS and CON for graduate Interprofessional Public and Population Health Certificate
- Participation with WiCPHET, and link to Regional Advisory Board for the Great Lakes Public Health Training Collaborative (Region V HRSA-funded PHTC) training page

Challenges

- Limited connections and resources for learning opportunities with grassroots community partners
- Limited resources at Zilber School for professional workforce development
- Limited marketing/recruiting resources for Interprofessional Public and Population Health Certificate
- Limited marketing/recruiting resources for MCH Certificate

Plan

- Coordinate workforce development opportunities with WiCPHET Academic Programs Council, WPHA, WALHDAB, WI DPH OPPA and expanded partners, including City of Milwaukee Health Department and CAB member organizations
- Explore opportunities for faculty engagement and CAB participation as well as for additional resources for continuing education activities at the Zilber School
- Develop recruiting strategies for Certificates in collaboration with campus and local and state partners

G1. Diversity and Cultural Competence

The school or program defines systematic, coherent and long-term efforts to incorporate elements of diversity. Diversity considerations relate to faculty, staff, students, curriculum, scholarship, and community engagement efforts.

The school or program also provides a learning environment that prepares students with broad competencies regarding diversity and cultural competence, recognizing that graduates may be employed anywhere in the world and will work with diverse populations.

Schools and programs advance diversity and cultural competency through a variety of practices, which may include the following:

- **incorporation of diversity and cultural competency considerations in the curriculum**
- **recruitment and retention of diverse faculty, staff and students**
- **development and/or implementation of policies that support a climate of equity and inclusion, free of harassment and discrimination**
- **reflection of diversity and cultural competence in the types of scholarship and/or community engagement conducted**

1) **List the school'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.**

The Zilber School's mission and values embody the school's commitment to fostering an environment for learning, teaching, researching, and working where "diverse voices, experiences, perspectives, disciplines, and approaches" are included, encouraged, and respected. The school considers its priority populations in the context of its education and workplace responsibilities "to advance population health, health equity, and social and environmental justice among diverse communities in Milwaukee, the state of Wisconsin, and beyond."

For students, the Zilber School defines its priority under-represented populations based on the school's commitment to educating the workforce to improve health and enhance health equity in Milwaukee, the state, and beyond. These populations are students who identify as Black/African American, Latinx, and Southeast Asian/Hmong. In discussing this list, faculty considered populations in Milwaukee affected by health disparities as well as UWM's access mission to include disadvantaged students from Milwaukee and throughout the state.

For faculty and staff, the Zilber School defines its priority under-represented populations based on its commitment to provide an inclusive and collaborative work environment. This commitment is reflected in Organization Goal 1 as presented in G1.2 below, and diversity among the faculty and staff is an important consideration in hiring. However, given the campus hiring freeze, the Zilber School has not hired any faculty in the past three years. Of the three staff hired in 2019, one was a person of color.

While UWM has no placement goals for the Zilber School tenured and tenure track faculty,[1] the school considers women and persons of color to be important populations. The loss of six faculty during AY 2020-21 affected the numbers of women and Black/African American faculty. As of

[1] UWM's current Affirmative Action Plan does not include placement goals for Zilber School tenured and tenure-track faculty because there is no statistically significant disparity in incumbent faculty and the population available to fill these positions (TR, personal communication with JCW, 2021, July 7).

spring 2021, 37% (7/19) of the faculty were women, down from a high in 2019 of 44% (11/25). One of two Black/African American faculty members remained. The school addressed this development in the recruitment strategies for the lecturer positions (see G1.3 below). At the start of AY 2021-22, among four new Lecturers, three are women, and one is an international person of color.

Looking ahead to AY 2022-223, two additional positions are planned. The school has contracted for a new permanent lecturer who is a woman. The PHPA Track has a search underway for a tenure-track faculty person to begin in August 2022, and the Search and Screen Committee has advertised the position in six academic, job, and association online portals to enhance diversity in the applicant pool.

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.

One of the Zilber School's two organizational goals specifically addresses diversity. Organization Goal O1 states: *Attract, support, and sustain a diverse student, faculty and staff community to ensure an inclusive and collaborative work environment.* Goal O1 is reflected in the school's student recruitment and retention activities and in faculty and staff hiring processes. The Zilber School is committed to increasing representation among Black/African American, Latinx, and Hmong populations and supporting these populations' success in the school.

To increase the number of students from the specified populations, the school is preparing a new recruitment and marketing plan. The Zilber Family Foundation grant has been instrumental for creating digital marketing materials to reach a broad audience of prospective BSPH students and their families. Undergraduate and graduate recruiting staff are both pursuing new recruiting opportunities and renewing connections post-pandemic with specific partners such as the Milwaukee Area Technical College (MATC).

To support students, faculty, advisors and Student Services staff draw on campus tutoring, multicultural centers, and the Dean of Students and Graduate School resources. Among other Zilber School resources are faculty, Undergraduate and MPH Program Directors, and Students Services advising as well as consideration of individual cases for need-based scholarships and other academic support by the appropriate faculty and administrative staff.

For faculty and staff, the Faculty Chair, administration and supervisors are strong advocates with the campus for the school's future development. Research resources through SOAR as well as the Research Incentive Policy and the new indirects costs approach support faculty's scholarly and community-engaged activities. Staff are able to access professional development opportunities to enhance their work.

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.

The Zilber School's current actions and strategies related to Goal O1 are in the areas of student recruitment and retention and lecturer and staff hiring during spring and summer 2021. In addition, the school is currently recruiting for a new tenure-track faculty member in the PHPA Track. Each area is discussed in more detail below

Student Recruitment and Retention
Regarding student recruitment, Academic Affairs staff reviewed recruitment activities with the Associate Dean for Academic Affairs/Acting Dean and faculty. Faculty contribute ideas for connections with different groups and participated in recruiting sessions for high school students.

For example, EHS faculty have given demonstrations in the KIRC teaching lab. Other staff and faculty have also participated in visits to high school Health Occupations Students of America (HOSA) classrooms. New this year, faculty have been asked to participate in one recruiting event this fall to provide prospective students an opportunity to talk with faculty during the recruitment process. Two Epidemiology Track faculty and the Acting Dean participated in BSPH campus events for high school students, and a third Epidemiology Track faculty member presented at a fall high school teachers conference with one of the Academic Advisors. The Community Engagement Director and MPH Director attended the November Graduate Open House, and the MPH Director participated in Conversations with the Dean along with the Acting Dean.

Another source of input is the Community Advisory Board (CAB). At its 6/29/21 meeting, the CAB offered input for different strategies to reach young people. They recommended reframing public health to emphasize the social justice mission and highlighting leadership in addition to research opportunities. One of the CAB members offered to provide input on materials for LGBTQ+ persons of color. Recruitment materials will be on future CAB agendas.

In terms of recruiting strategies to engage with students from the priority populations, the undergraduate and graduate programs have identified specific activities to enhance success. The undergraduate recruitment brochures and flyers are printed in Spanish and English. The advisors participate in the campus Casa Abierta event each semester where translators are available to speak with families. They work with program staff in the campus TRIO programs to connect with students interested in health careers, and they also attend many events in the greater Milwaukee area. New this year was a recruitment event at College of Lake County, which has a large Latinx population. In addition, after a year of leadership transition at MATC, which has large populations of Black/African American and multi-ethnic students, advisors have been scheduling more class visits in courses that are transferrable to the BSPH Program. Advising staff expect to revisit their plans with MATC in the spring. In addition, one of the Academic Advisors presented in December to the UWM Upward Bound Program, one of the TRIO Programs. See ERF G1.3 for information on BSPH recruitment events and outcomes. At the graduate level, the Graduate Advisor and Peer Recruiter attend a range of events hosted by minority student associations on campuses around the state. They also connect with the McNair Scholars Program and connect with staff in the campus multicultural centers for presentations and distribution of materials.

In terms of retention strategies, faculty and staff employ a mix of approaches at the undergraduate and graduate levels. Faculty and staff use a personalized approach to address students' particular circumstances. For example, the Office of Academic and Student Affairs considers emergency scholarships to clear bursar accounts for re-enrollment. In the BSPH Program, for example, the Undergraduate Program Director worked with instructors of students in the Accelerated Master's Degree (AMD) Program to ensure a smooth transition for everyone in this program's first year. Incoming freshmen may take PH 100 New Student Experience in Public Health, where one of the speakers is the Inclusive Excellence Center Director. Students learn about the four Multicultural Centers (American Indian Student Center, Black Student Cultural Center, Roberto Hernandez Center, and Southeast Asian American Student Center), and a number of BSPH students seek support from staff in these centers. The Academic Advisors also hold special events for BSPH students to foster connections. The PHSA has a mentoring program which pairs undergraduate and MPH students for the year. Currently, 21 students are participating, as six pairs and three trios. In the spring semester PHSA plans to share mentoring resources and plan an event for the larger group.

At the graduate level, the Associate Dean for Academic Affairs, MPH Director, and advising staff work closely with doctoral and master's students to address academic and personal concerns. For example, the Associate Dean for Academic Affairs identified a tutor for students in a doctoral course and facilitated leaves for a couple of master's students. During the pandemic, faculty have been encouraged to be flexible with assignment deadlines as students' situations change.

Faculty and Staff Hiring 2021 - 2022

Lecturer Recruitment

During Spring and Summer 2021, the school conducted a search for three permanent lecturers for Fall 2021. With input from the HR Manager, the Acting Dean created a search and screen committee composed of two staff members who had not previously served on this committee and named a tenured woman faculty member as chair. To enhance the diversity of the applicant pool, the Search and Screen Committee incorporated new recruitment strategies. In addition to notices in national professional journals, the school purchased the Diversity Boost online advertisement package plan through *The Chronicle of Higher Education*. The Diversity Boost package allowed our job announcement to be advertised on highly recognized diversity-targeted job sites, such as DiversityWorkMatch.com and NationalDiversityNetwork.com. For the first time, the school used LinkedIn as another source for online advertisement. Even though LinkedIn is not a diversity-targeted job site, faculty and staff were able to share the announcement on their personal LinkedIn page with their professional and personal networks. The school also placed the announcement on the Wisconsin Public Health Association (WPHA) career center web page, and faculty and staff sent the announcement to colleagues in and out of state. As a result of these new strategies, of the eight finalists, three were international persons of color, and one accepted the offer for a lecturer position. A woman accepted a second Lecturer position. Subsequent to the search, three additional limited-term lecturers were hired for 2021-22, all of whom are women.

Staff Recruitment

During Spring and Summer 2021, the Zilber School recruited for two staff positions. One was a new position for an administrative support person in Academic Affairs. The second position was for the Student Services Coordinator. The HR Manager used previous recruitment strategies to enhance the diversity of the applicant pool for both positions. The job postings included the following language: “Ability to communicate and foster effective relationships with people from diverse cultural, education, and financial backgrounds.” In other words, the ideal candidate would incorporate the school’s mission and vision of diversity and inclusion in their responsibilities. The HR Manager sent the job announcements to a recruiting site for non-profit job openings. The HR Manager also posted the positions on LinkedIn. By using LinkedIn as another online advertisement source, staff and faculty could share the announcement with their personal and professional networks. For the new administrative specialist position, of the 10 finalists, one was African American, one was Latinx, and one was Asian. The Latinx candidate started the position in September 2021. The search for the Student Services Coordinator position is on hold pending evaluation of student services needs for the proposed reorganization two health colleges.

Tenure-track Faculty Recruitment

The school is currently recruiting for a tenure-track position in the PHPA Track for AY 2022-23. This permanent position replaces one of the lecturers contracted for AY 2021-22. Maintaining the effort to ensure a diverse pool of candidates, the school again purchased the Diversity package through the *Chronicle of Higher Education*, and the announcement was placed in a range of job sites including Wisconsin Public Health Association, Emory Rollins School of Public Health, and Public Health Jobs. A written ad was also purchased to ensure appropriate documentation for international candidates. The Search and Screen Committee will begin reviewing applications in mid-January.

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.

Zilber School strategies to create and maintain a culturally competent environment include faculty and staff professional development, curricular requirements, Student-Faculty Town Hall process,

the Research Seminars and On Public Health series, and the PHGSA Spring 2021 speaker series.

Faculty / Staff Professional Development
In Spring 2021, faculty and staff completed the Anti-Racist, Anti-Bias training developed by UWM. Consisting of five modules, this training is part a broader initiative to ensure that the campus community is achieving racial equity. Everyone had the option to join a facilitated group for discussion of the material. In January 2022, Zilber School faculty and staff will complete the Trauma-Informed education workshop offered by the Dean of Students.

The school makes other trainings available as well. The Acting Dean will work with UWM's new Vice Chancellor for Diversity, Equity and Inclusion to plan professional development activities for faculty and staff on marginalized identities. This work is intended to expand on a brief session offered by the LGBTQ+ Resource Center in 2019 during a School/Faculty meeting. A session planned for Fall 2020 had to be canceled due to the White House Executive Order on Combatting Race and Sex Stereotyping. Zilber School and College of Nursing Student Services staff participated in a two-session training on gender equity. Other training opportunities will be offered by the school or campus as they are identified or become available.

Curricular Requirements
Students in all degree levels are exposed to and/or discuss the topics of racial equity, health equity, and cultural humility in their curricula. In the BSPH Program, among the required major courses are PH 202 Public Health from Cells to Society II, PH 319 Introduction to Health Disparities, and PH 427 Strategies in Action for Public Health. PH 202 and PH 319 cover structural determinants of health inequities with an emphasis on structural and systemic racism. PH 427 spends six weeks on community-engaged frameworks and approaches including the role of culture and dispelling the savior complex. Students in PH 600 Integrative Experience interact with diverse populations through their projects with the placement organization.

In the MPH Program, core courses such as PH 704 Principles and Methods of Epidemiology and PH 706 Perspectives in Community and Behavioral Health address health equity and cultural humility. In their Field Experiences (PH 790), MPH students' projects address a range of issues affecting diverse populations guided by organization preceptors. Examples of Field Experience settings where student engage issues related to diversity, inclusion and cultural humility are the Wisconsin Alliance for Women's Health, the Foundation for Black Women's Wellness, the City of Milwaukee Health Department, Milwaukee Riverkeeper, Health Connections Medical Clinic, Inc., Diverse and Resilient, and the Sixteenth Street Community Health Centers. The course PH 700 Structures of Inequality and Population Health covers social justice praxis and structural analysis of race, gender, social class, and disability among other topics. Additional courses with an emphasis on health equity and cultural humility, open to doctoral students as well, include PH 758 Social Epidemiology and PH 763 Epidemiology for Equity.

Among doctoral-level courses, open to MPH students as well, are PH 819 Social and Environmental Justice in Public Health and PH 831 Community Engagement and Participatory Research Approaches in Public Health.

Students have a range of course options from which to choose. The classroom time is enhanced by guest speakers who bring community perspectives and experiences and by assignments that involve critical thinking, self-reflection, and problem-solving. Students and the CAB alike have highlighted the importance of broadening the diversity of speakers in classrooms.

Student-Faculty Town Hall Process
Another forum where issues related to school climate and cultural competence may come up is during the Student-Faculty Town Hall process. MPH and PhD students each participate in a survey early in the spring semester. The GPC and track faculty have an opportunity to respond to the results from both surveys, and students and faculty convene during separate Town Halls later

in the semester to review faculty recommendations and answer questions. While the Town Hall in Spring 2020 was not held due to the pandemic, a concern about safety based on marginalized identities during interactions with faculty and staff was expressed in the surveys. The Acting Dean worked with the Interim Director of the LGBTQ+ Resource Center during AY2020-21 to better understand the concerns of students in this domain. The Interim Director met with students for two sessions during Spring 2021. The Interim Director unexpectedly left UWM, and plans are being retooled.

Research Seminars / On Public Health series
The Research Seminar and On Public Health series offers the school, campus, and broader community opportunities to engage on important public health issues. Health equity, racial equity, social determinants of health, and cultural humility are often at the core of these issues. Input for research seminar topics comes from faculty. For example, in September 2019 a faculty member invited a colleague whose presentation was titled, "Structural and Social Determinants of Dietary Behaviors in Black Women: Implications for Obesity Prevention." This seminar was attended by 35 people from the school, campus, and community. Depending on the guest's schedule, faculty and doctoral students may meet separately with the speaker for a focused discussion.

On Public Health topics are chosen by the Research Seminars/On Public Health Committee with input from faculty, staff and students. Recent topics addressing cultural humility, racism, and social determinants of health include lead, housing, COVID-19 and vaccinations, and COVID-19 and contact tracing. In addition, CAB members offered their input at the 6/29/21 meeting. Among the topics suggested were housing, dental care access, incarceration, and mental health services.

PHGSA Spring 2021 speaker series
In response to the murder of George Floyd and to support dialogue in the school community on racial equity, the PHGSA sponsored three speakers during the spring semester. In early February 2021, Reggie Jackson, Co-Founder of Nurturing Diversity Partners, presented on "The Hidden Impact of Segregation." Two UWM faculty presented in March and April 2021. These presentations had a global health focus, one on gender equity and the second on folklore and the integration of cultural diversity. In choosing these speakers, the PHGSA team created opportunities for the school community to think critically about race, history, gender, and "culturally diverse global public health practices."

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.

The school collects data on the three student priority under-represented populations. The data for Black/African American, Latinx, and Southeast Asian/Hmong students come from the campus and SOPHAS. Data from Table H4-1 are presented below as well. As the table indicates, over the past three years the school achieved its target for the measure of diversity across the school. Indeed, there was a slight increase from 2018 to 2019 and 2020.The school's location, accreditation, and commitment to social and environmental justice help explain why students from diverse backgrounds and experiences decide to enroll in undergraduate and graduate public health programs here.

To place these data in context, a set of two tables each for the undergraduate and graduate students shows public health student enrollment by specific self-reported race/ethnicity categories and the corresponding demographic data for the UWM campus, Undergraduate / Graduate School, Milwaukee, and Wisconsin. See ERF G1.5 for these tables. For the undergraduates in AY 2020-21, the percentages of enrollments for students identifying as African American and Hispanic/Latino exceed the percentages of UWM and UWM undergraduate enrollments. However, the percentages for African American and Hispanic/Latino students are below the mark for the comparable percentages in the City of Milwaukee. Of note is that the percentage of

enrollment of students identifying as Native American exceeds the percentages of UWM and UWM Undergraduate enrollments as well as the city and state.

For the graduate students in AY 2020-21, the percentage of enrollment for students identifying as African American slightly exceeds the percentage of UWM Graduate enrollment (6.1%/Zilber School and 5.8%/UWM Graduate). Similar to the undergraduate enrollment for African Americans, the percentage of African American students in the Zilber School is not comparable to the percentage of the population in the City of Milwaukee. The percentage of enrollments for students identifying as Hispanic / Latino falls short across all benchmarks. The percentage of enrollments by students identifying as Multiethnic exceeds the UWM Graduate enrollment as well as the city and state. Finally, the percentage of SE Asian students enrolled exceeds all benchmarks. These current data reflect the benefits of some specific strategies that the Zilber School has used over the past several years to increase the diversity of the student body. Even as social and economic factors affect the available pool of students, not to mention effects of the pandemic on students' education plans, the school recognizes that more work needs to be done.

Table G1.5 Outcome Measures for Recruitment and Admissions				
Outcome Measure	**Target**	**2018**	**2019**	**2020**
Percent of African American, Latinx, Hmong students by year across all degree programs	**20%**	20%	22%	22%

6) Provide student and faculty (and staff, if applicable) perceptions of the school's climate regarding diversity and cultural competence.

The Zilber School previously conducted a Diversity Survey in Spring 2018. This survey was designed for students, and the response rate was 36% (27/74 students). The school conducted its second survey in Spring 2021. The Evaluation Workgroup decided to include staff as well as faculty and students, and a total of 230 people received the Survey. The breakdown was 186 students, 30 faculty and spring affiliate / ad hoc faculty, and 14 staff. Unlike the 2018 Survey, the 2021 Survey included undergraduates. The Survey was open between April 14 and April 25, 2021. One email reminder was sent to everyone on April 21, 2021. The Evaluation Workgroup met on April 8, 2021, to finalize the questions. Several questions from the 2018 Diversity Survey were eliminated to shorten the Survey. See ERF G1.6 for the Diversity Survey.

While a total of 41 people started the Survey, 40 people completed the Diversity Survey for an overall response rate of 17% (40/230). About 22% of all respondents indicated that they were American Indian, Hispanic/Latinx, Black or African American, Asian, or Other. Of the 40 who completed the Survey, 27 were students, 7 were faculty, and 6 were staff. The response rates were 14.5% for students (27/186), 23% for faculty (7/30), and 43% for staff (6/14). The timing of the Survey helps explain the low response rate. Students were also completing the Competency Self-Assessment and Graduation surveys. In addition, faculty and students were trying finish the semester online during the pandemic.

Results

Quantitative

Overall, responses were positive. For example, 82.5% of students, faculty, and staff rated as True (Very True, True, Somewhat True on 7-point scale) the statement, "Overall, I am satisfied with my experience at the Zilber School of Public Health." Among students, 85% rated this statement as True, while 57% of faculty and 100% of staff rated this statement as True. In the same question block, 75% of respondents rated as True the statement, "The Zilber School provides an environment for the free and open expression of ideas, opinions, and beliefs." Among the three groups, a little more than half the faculty respondents indicated that the statement was true, while

slightly over three-quarters of the students and over three-quarters of the staff responded that the statement was true.

In a third statement in that question block, about two-thirds of all respondents rated as True the statement, “I feel as though I belong to this school community.” The range among students, faculty, and staff was from 57% of faculty rating the statement True to 100% of staff rating the statement as True. Among students, 67% rated the statement True.

In response to the question, “How often have you done the following at the Zilber School,” 67.5% responded Often (Very Often, Often, Somewhat Often) to the statement “Made an effort to get to know people from backgrounds different than my own.” Among students, 63% indicated that they often made an effort to get to know others different than themselves. Among the faculty respondents, 71% reported that they often made an effort to get to know others, while 83% of staff said they often made an effort to get to know others different than themselves.

In the same question, 87.5% responded Often to the statement “Become aware of the biases that affect my own thinking.” Among students, 92.5% reported that they often became aware of biases that affected their own thinking. Among the faculty respondents, 71% indicated that they often became aware of biases that affected their own thinking, while among staff, 83% responded that they often became aware of biases in their own thinking.

Table G1.6.1 presents results for selected statements from these two questions.

Table G1.6.1 Selected results (Percent Positive Response) from the Spring 2021 School Diversity Survey

Question / Item	Students (N=27)	Faculty (N=7)	Staff (N=6)	ALL (N=40)
How true is each of the following statements?				
Overall, I am satisfied with my experience at Zilber.	85%	57%	100%	82.5%
I feel as though I belong to this school community.	63%	57%	100%	67.5%
The Zilber School provides an environment for the free and open expression of ideas, opinions, and beliefs.	78%	57%	83%	75%
How often have you done the following at the Zilber School?				
Made an effort to get to know people from backgrounds different than my own	63%	71%	83%	67.5%
Become aware of the biases that affect my own thinking	92.5%	71%	83%	87.5%

Turning to the curriculum, students were asked their thoughts on various aspects related to public health courses. Overall, responses for appropriate and inclusive language, instructors being culturally sensitive, and different views and perspectives encouraged in classes were positive, with over three-quarters of students rating these three dimensions as True (Very True, True, or Somewhat True on 7-point scale). Turning to the degree to which issues are discussed in classes, meanwhile, the range of percent responses rated as True varied considerably. Over three-quarters of students rated as True that classes adequately discussed issues related to race and ethnicity. While about two-thirds of students thought that classes adequately discussed gender identity, slightly more than half indicated that classes adequately discussed disability. Only 33% of students thought that classes adequately discussed immigration/citizenship, and 22% of students thought that classes adequately discussed religion.

Table G1.6.2 Selected results (Percent Positive Response) for Students' Thoughts on Public Health Courses from the Spring 2021 School Diversity Survey

Thoughts on Public Health Courses	All Students (N=27)
Language used in classes is appropriate and inclusive.	81%
Instructors are culturally sensitive.	85%
Different views and perspectives are encouraged.	81%
Classes adequately discuss issues related to race/ethnicity.	81%
Classes adequately discuss issues related to gender identity.	67%
Classes adequately discuss issues related to disability.	52%
Classes adequately discuss issues related to religion.	22%
Classes adequately discuss issues related to immigration/citizenship.	33%

Qualitative
Students, faculty, and staff were invited to share comments in response to the following question: "The questions of this survey have raised a number of issues. From your perspective, please offer suggestions on how the Zilber School might improve the school environment. Additional comments or observations are also welcome." The comments offered suggestions for school-wide social and educational events as well as input on courses and faculty recruitment and retention. Selected comments are presented below.

~ Offering additional events with speakers and forums for discussion/interaction." [staff]
~ Organize more social events for faculty and students to interact [faculty]
~ Please acknowledge the additional barriers some of your minority students may be facing . . . . I constantly feel like I'm in a room with students with very similar, privileged backgrounds and there hasn't been a space where those perspectives can be challenged. [student]
~ Have more conversations about these topics that go beyond surface level to really challenge us and our thinking. I expected to be challenged all the time on these topics but feel like I have barely been at all . . . . [student]
~ Create an environment in which Zilber can attract and retain women and faculty of color [faculty]
~ We have to figure out a way to make Zilber more accessible to students from various backgrounds. In addition, there is a glaring gap in female faculty of color right now. I've had great experiences with all of the faculty, but representation is so important for students. [student]

Discussion
Overall, students, faculty, and staff indicated as True that they were satisfied with their experience at the Zilber School and that the environment supported free and open expression of ideas, opinions, and beliefs. In addition, over three-quarters of respondents indicated that they were more aware of biases in their own thinking. The Zilber School has succeeded in creating an environment where people feel comfortable expressing their ideas and challenging their own

biases. Furthermore, over three-quarters of student respondents indicated that language in classrooms is appropriate, and instructors are culturally sensitive.

At the same time, both quantitative and qualitative results highlight several areas for improvement. Across students, faculty, and staff, the percent indicating True to the statement "I feel as though I belong to this school community," was lowest among faculty and then students. While everyone has been affected by the pandemic, faculty and students likely have other concerns as well, including the curriculum. The staff experience, meanwhile, may reflect a positive sense of working together and keeping in touch through regular staff meetings.

In terms of the comments about attracting and retaining women and women faculty of color, through summer 2021 recruitment for four lecturers, three people joining the school for AY 2021-22 are women, and one is a person of color. Attracting a diverse pool of applicants remains a priority for recruiting the tenure-track faculty member during 2021-22.

Finally, among students' thoughts on whether important social issues are adequately covered in classes, the range of percent varies considerably. While over three-quarters of students feel that race/ethnicity are often adequately covered, they feel that religion and immigration/citizenship are not covered adequately. The murder of George Floyd and the Black Lives Matter protests highlighted the significance of structural racism in the society. Students and faculty alike were prepared to focus on this topic.

The Evaluation Workgroup, Faculty Council and administration will discuss the results of the survey during the spring semester and develop a set of recommendations for action. They will conduct additional data analysis on the 2021 Diversity Survey as well as compare results for student responses from the 2018 and 2021 Surveys. Input from PHSA will be important as well.

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

Strengths

- A range of training/professional development opportunities, curriculum requirements, and school events supports the Zilber School's mission and goal of ensuring an inclusive, respectful learning and working environment
- Zilber School is currently meeting its target for the three priority student populations (African American, Latinx, and Southeast Asian)

Challenges

- Implementation of a school diversity and inclusion plan with recommendations from 2021 Diversity Survey (not revisited since 2018)
- Recruitment of a diverse student body
- Recruitment and retention of a diverse faculty complement
- Degree to which important social topics are adequately covered
- Limited participation in the Diversity Survey

Plan

- Develop school diversity and inclusion plan to be responsive to expressed commitment to a diverse community and ensure an inclusive and collaborative working and learning environment
- Continue to refine recruitment plan and materials to attract a diverse student body through intentional marketing and explore scholarship opportunities
- Review procedures in hiring and recruiting to attract a diverse pool of applicants in light of school mission and values as opportunities occur
- Discuss with faculty a role for Community Engagement staff and CAB to expand potential range of guests as classroom speakers

- Work with PHSA, Faculty Council, and administration to increase participation in the 2023 Diversity Survey

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.**

All BSPH, MPH, MPH-MSW, MS, and PhD students have a designated advisor from the time they begin their program in the School of Public Health. Staff and faculty advisors have different resources available for academic advising, including the campus Navigate system for undergraduates and the Advising Timeline and Form for MPH students. Services for undergraduate and graduate students are presented below.

Undergraduate Student Advising
There are two full-time undergraduate student academic advisors in the Student Affairs Office. Both undergraduate advisors work with current students and divide the work on different undergraduate populations. One advisor works with first-year students and the campus/school activities designed for the traditional student experience, while the second advisor focuses on transfer students and students in the Accelerated Master's Degree (AMD). All students admitted to the undergraduate program participate in mandatory advising, meeting with their advisor each semester to determine the courses they will take for the upcoming semester, reviewing their academic plan, and discussing strategies for success. Advisors create academic plans for each student allowing for greater understanding about their academic progress. The academic plan also helps minimize errors and ensures they fulfill all requirements. Students are encouraged to reach out more frequently if they have questions or concerns.

Along with curricular advising, the two academic advisors are the primary resource for students. They are trained in campus and community resources, and students seek them out when in need of academic, financial, emotional, and mental/behavioral health support. The advisors use Navigate, an Education Advisory Board (EAB) product, to connect students to campus resources and track their progress. Advisors also host retention events (for example, cookie decorating at Halloween time) to help create a culture of community within the program.

Graduate Student Advising
Prior to May 2021, graduate students were advised by the Student Services Manager and a Faculty Advisor. The Student Services Manager helped students register for first semester classes and monitored progress through the program. Faculty advisors took over advising when students started the program, providing guidance on course selection, the Field Experience and Capstone. Faculty advisors also reviewed plans of study with their doctoral students and provided guidance on pre-dissertation research credits, the preliminary exam, committee composition, and the proposal and dissertation process.

In June 2021, a Student Services staff person transitioned into the role of Graduate Advisor. The Graduate Advisor serves as a resource to graduate students throughout the program and assists with improving the student experience to enhance the overall graduate program. She advises graduate students from admissions through graduation on course selection, logistics of degree progression, and UWM Graduate School policies and procedures. The Graduate Advisor monitors degree progress and assists students in navigating campus resources. She also informs and keeps the faculty and students up to date with new and current University, Graduate School, and department policies, procedures, and requirements. The designated faculty advisor provides

input on specific courses, the Field Experience and Capstone, and career direction and decisions. Doctoral student advisors (major professors) provide input on course selection, proposal and dissertation committees, the proposal and dissertation, and career direction and decisions.

Once students are accepted into the graduate program, the Graduate Advisor provides them with information for enrolling in their first semester classes prior to the start of the semester and corresponds with incoming students to establish a sense of community. The Graduate Advisor plans and administers the Fall and Spring Orientations, involving school leadership, faculty, and current students. A primary part of orientation is for students to meet with peers in their track, their track's primary faculty, and their designated faculty advisor. During the orientation, students are presented with the latest edition of the Graduate Student Handbook and the Field Experience Handbook. Students can access both handbooks online (see links / ERF locations in H1.3 below).

The Graduate Advisor shares a number of program resources including the MPH Advising Form, Timeline, and Plan of Study fillable worksheets (one per program/track). The GPC updated the Advising Form in Fall 2019 to clarify student and faculty responsibilities, and the faculty approved the revision on 2/28/20. These documents standardize faculty advising to ensure all MPH students receive at least two meetings per year. The plan lays out a focus in the fall on Field Experience (year one) and Capstone (year two) and competency self-assessment at the beginning of year 2. The fillable worksheets allow students to track their Plan of Study by checking off courses as they take them and filling out semester and year planned/completed. This helps the advisor and student count courses/credits needed for graduation. This approach also facilitates planning for the next year's course offerings and schedule. See ERF H1.1 for the MPH advising forms (also linked here).

Additional faculty advising tools are the MPH Competency Self-Assessment Survey and designated advising weeks. Prior to the 2021 MPH cohort, students completed the Competency Self-Assessment survey at three time points: during orientation in groups in the Computer Lab (Pre), at the end of the first year of courses (Interim), and in the last semester Capstone course (Post). Faculty advisors used results from the Pre- and Interim Competency surveys to guide course selection with an eye toward filling in gaps in desired competencies to meet career goals. The aggregated cohort data are used for program assessment as well. At the 11/30/21 Evaluation Workgroup meeting, Workgroup members decided to eliminate the Interim Competency Survey as the timing for Field Experience advising and curriculum improvement was not working. See ERF H1.1 for the 11/30/21 Evaluation Workgroup notes.

In 2019, the Student Services staff initiated Advising Week, in conjunction with the Faculty Chair and GPC, to provide structure and coordinated communication around graduate advising and academic support. Advising weeks were held on March 23-27, 2020; October 19-23, 2020; March 15-19, 2021, and October 11-15, 2021.

Doctoral students are in regular contact with their major professors regarding course selection (at least once a semester) and progress through the preliminary exam and dissertation processes. Doctoral advising resources include the Doctoral Preliminary Exam (and Dissertation) Timeline as well as the Progress Letter approved by the Faculty Council in May 2021. See ERF H1.1.

2) Explain how advisors are selected and oriented to their roles and responsibilities.

The School of Public Health has both professional advisors and faculty advisors who provide undergraduate and graduate advising services.

Student Affairs Advising
The Zilber School has three full-time professional staff who are responsible for advising students. They have master's degrees as well as experience in higher education and advising. Academic advisors are educated on both university and public health major graduation requirements from their supervisor. Undergraduate advisors are trained on course prerequisites

and sequencing for the major in addition to the required foundational classes. They also provide resources and advice to students who are transitioning into the AMD program. The Graduate Advisor is trained on program requirements and course sequencing in both the masters and doctoral programs. Advisors are assigned by their supervisor to participate in workgroups and committees across campus including the Advisor Counselor Network and the undergraduate/graduate planning committees and student/academic affairs meetings within public health.

Faculty Advising
The five Track Leads administer graduate faculty advisor assignments within their respective tracks at orientation. Advisor assignments are based on information in each student's application with the intent to match student-faculty interest areas, while considering equity of faculty workload. If a student changes tracks, the welcoming track will assign a new faculty advisor. The Graduate Student Handbook explains that a student can request a new faculty advisor through the Graduate Advisor (Student Affairs staff), who will facilitate the change.

The four new instructors (2 Lecturers, 2 limited-term Lecturers) attended sessions at the 8/26/21 Zilber School orientation with students in which advising expectations were reviewed. Some of the lecturers also met with track leads. The Faculty Chair and Student Services staff provide reminders about timing for advising and updates on materials at the first Faculty Council meeting in September. The Graduate Advisor as well as the Community Engagement and Student Services staffs also address individual faculty members' specific questions and concerns about courses, Plans of Study, and the Field Experience. See ERF H1.2 for 10 MPH Advising FAQs and the 2021-22 faculty calendar as examples of resources for faculty.

3) Provide a sample of advising materials and resources, such as student handbooks and plans of study, that provide additional guidance to students.

Sample Advising Resources (Links and ERF)

Student Handbooks
- Academic Year 2021-2022 Undergraduate Student Handbook (See ERF H1.3)
- Academic Year 2021-2022 Graduate Student Handbook: (https://uwm.edu/publichealth/wp-content/uploads/sites/571/2021/10/2021-2022-Student-Handbook.pdf)
- Field Experience Handbook add new link for revised version (See ERF H1.3)

Forms
- Undergraduate Academic Plan of Study: established with the student based on student's goals and individual situation and copy is emailed to the student (See ERF H1.3a).
- Undergraduate Academic Advisor Student Planner: used by the advisor to help guide a student's Academic Plan of Study and double check requirements are being met (See ERF H1.3b).
- Academic Advisement Reports: provides an outline and graduation checklist for the student to view as well as the advisor to confirm requirements are met for graduation (in individual student PAWS' accounts).
- Graduate Student Plans of Study: https://uwm.edu/publichealth/students/current/plans-of-study/

Student Resources
- Undergraduate Advising
- MPH and PhD Advising Forms and Timelines
- 10 MPH Advising FAQs (See ERF H1.2)

Campus Resources

- BSPH - Navigate

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.

Academic Affairs staff collect data about student satisfaction with academic advising using two separate processes. Student Affairs staff administer the BSPH advising survey every semester. The Student Affairs Office administers the MPH Graduation Survey every fall and spring in conjunction with the Capstone course. At this time the MS and PhD students do not have graduation surveys given the small numbers in any given semester. Students in these programs would be able to discuss any concerns about advising with the program Track Leads and/or Associate Dean for Academic and Student Affairs.

Undergraduate Student Advising Surveys

The School of Public Health administered the first undergraduate academic advising survey in Fall 2019. Surveys are distributed electronically via Qualtrics toward the conclusion of each fall and spring semester. The school administered the advising survey in three semesters (Fall 2019, Fall 2020, and Spring 2021). Due to the pandemic and the change to remote work, advising surveys were not distributed during the Spring 2020 semester.

In Fall 2019, 26 students were surveyed, and nine students responded, for a response rate of 34%. The survey addressed ease of making appointments and overall satisfaction with guidance of academic offerings and resources. All respondents (100%) either Strongly Agreed/Agreed that it was easy to make arrangements to see an advisor and that advisors were able to address their concerns.

In Fall 2020, the program distributed another academic advising satisfaction survey, and the results are presented in ERF H1.4. We received 18 responses out of the 65 surveys distributed for a response rate of 28%, and the feedback was very positive. Advising was held virtually through Microsoft TEAMS or via phone call. Of those who responded, 85.7% had a virtual TEAMS appointment while 14.3% held their advising appointment by phone. Eleven (11; 61%) students said they “Strongly Agreed” that it was easy to connect via TEAMS or phone for advising, while 7 (39%) students “Agreed.” Among the 18 responses, 88% either “Strongly Agreed” or “Agreed” (16/18) that their goals were met for their advising appointment. Two students did not respond to the question. One comment that we can use to improve our services to students stated, “UWM should share more details about virtual classes, changes, and graduation details with advisors, so they are better prepared to handle student questions.”

In Spring 2021, the survey was sent to 68 students with 26 (38%) student’s responding. Of those who responded, 92% of the students scheduled their advising appointment via Microsoft TEAMS, while 8% scheduled a phone appointment. All respondents (100%) agreed with the ease of making arrangements to meet with their advisor, and 96% strongly agreed/agreed that their goals were met in their advising appointment.

Students shared comments about virtual advising. Overall, the feedback was positive. Students felt comfortable and reassured, as the quotations below illustrate.

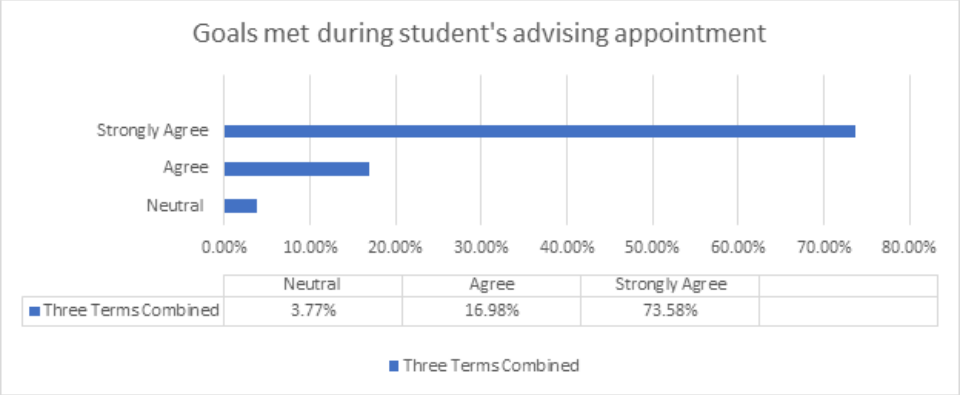
“Even though we had to switch to an online format, it was just as easy meeting with my advisor as before. It was easy to set up a meeting time that was not so far off into the semester. In every meeting I had with this advisor my questions and concerns would be answered thoroughly and she cleared up any confusion. Plus, she is an easy person to talk to; she was very open and friendly and having meetings would never feel uncomfortable or awkward. I would definitely recommend my advisor to others.”

“Teams is a good place to meet because you are able to share documents easily.”

“I always left a meeting feeling reassured and like I was on the right track!”

Figure H1.4 below summarizes the combined response rates for the question, “My goals were met for this advising appointment.” The total number of survey responses for the Fall 2019, Fall 2020, and Spring 2021 semesters was 53 students. Fall 2019 had 9 responses, Fall 2020 had 18 total responses, and Spring 2021 had 26 total.

Figure H1.4 Goals Met during Advising Appointments, Fall 2019, Fall 2020, Spring 2021



Master of Public Health (MPH) Graduation Surveys
MPH Graduation Surveys are administered as part of the Capstone course. Toward the end of the fall and spring semesters students receive both the Graduation Survey and Competency Post-Assessment Surveys. Points have been assigned as part of the grading in the Capstone beginning in the Spring 2020 semester; however, the response rate has varied over the past several semesters. While UWM suspended all course evaluations in spring 2020, faculty in the Evaluation Workgroup (5/13/20) meeting noted that the COVID-19 pandemic may help explain the low response in Fall 2020 and Spring 2021. Response rates for the past three years have ranged from 67% for the 2019 graduates (before points were included in the Capstone course) to 81% for the 2020 graduates. The response rate for the 2021 graduates, meanwhile, was 70%.

In the Graduation Survey (see ERF H1.4), students are asked in Question #20 to rate their overall satisfaction with the quality of 11 items related to the MPH Program, including Advising. Satisfaction is defined as Very Satisfied (1) and Satisfied (2) on a 5-point Likert Scale. Satisfaction data for Advising among students who graduated in 2019, 2020, and 2021 are presented in Table H1.4.1

Table H1.4.1 Percentage of MPH 2019, 2020, and 2021 graduates satisfied with advising

Item	2019 (N=10)	2020 (N=22)	2021(N=19)
Satisfaction with quality of Advising	60%	59%	68%

Results from 2019 and 2020 Graduation Survey results indicate that slightly more than half are satisfied with advising services. Among the 2021 graduates who responded to the survey, meanwhile, 68% indicated that they were satisfied with advising services, a slight increase over the previous two years.

The Zilber School has taken several steps to address MPH student concerns about advising. Based on the MPH Town Hall process in Spring 2019, the GPC recommended in its 2018-19

Annual Report that the GPC review MPH advising processes in AY 2019-20. During the fall 2019 semester, GPC committee members streamlined the advising process and revised the MPH advising form. The GPC approved the form on January 27, 2020, and the Faculty Council approved the form on February 24, 2020. See ERF H1.4 for the Advising Form. The form was renamed to MPH Advising Form to clarify the purpose of the meetings. The form also more clearly identified topics for faculty and students to cover in each of four required meetings over the course of the two-year program. Graduates in 2021 would have benefited from using this form in their second year.

In an ongoing effort to improve advising services, one of the Student Services staff transitioned into the role of Graduate Advisor for AY 2021-22. The Graduate Advisor will provide input on course scheduling, Graduate School policies, and confirm plans of study. Faculty advisors, meanwhile, will emphasize the course selection, the Field Experience and Capstone projects, and career advising.

5) Describe the orientation processes. If these differ by degree and/or concentration, provide a brief overview of each.

Undergraduate orientation is sponsored by the UW-Milwaukee, Office of Undergraduate Admissions (OUA) where students from all schools/colleges participate and register for classes. UWM's Graduate School sponsors a general orientation for all incoming graduate students, and the Center for International Education holds an orientation for international students. The Zilber School hosts a separate graduate student orientation for incoming students. The two orientation programs are presented below.

Undergraduate Orientation Process
Newly admitted first-year and transfer students are required to go through a new student orientation conducted by the UWM New Student Programs through OUA. Prior to the pandemic, all incoming first-year students attended an overnight orientation program on campus during the summer before the start of the fall semester. Transfer students could attend an optional day orientation and were required to meet with their advisor to enroll in classes and review resources available to them.

The public health academic advisors send the students a welcome email. The email provides information to assist them in completing any remaining holds or checklist items they needed to complete in order to register for orientation.

The new student orientation program is designed to assist them with the transition to college and includes discussions on Health and Successful U, Campus Exploration, Housing Services, Finances, Technology, and lastly, registration of the fall classes with their academic advisor. Due to the pandemic this past summer, all 2021 orientation was conducted online. Once the student completed their live online orientation, they scheduled an online meeting with their advisor and enrolled in their classes.

Incoming transfers are also required to complete an orientation. Transfer orientation is a condensed version of the new freshman orientation and addresses information imperative to a successful transition to the university including academic and extracurricular resources.

Graduate Student Orientation process

The Zilber School graduate student orientation is mandatory for all incoming graduate students (MPH, MS, MPH-MSW, PhD) in the fall and spring semesters. Students are notified through email several months prior to the event. Student Services staff coordinate the event with participation from faculty. Prior to March 2020, the orientation was a day-long, in-person event. The Fall 2020 and Spring 2021 orientations were offered virtually in compliance with university protocol due to the pandemic. The Fall 2021 orientation was hybrid with an in-person, half-day event held on

August 26, 2021, and several shorter virtual sessions scheduled for Fridays in September and October 2021.

Orientations are an opportunity to share information about the school, program and people that are important to the student experience. Topics covered during graduate student orientation are: Welcome/Introduction to the Day, Academic Integrity, Safety and Building Basics, Library Resources, Field Placement /Capstone (Master of Public Health Students), PhD Prelims/ Dissertation (PhD Students), Student Panel, and a "meet and greet" with faculty advisor. Among the presenters are the Acting Dean, Graduate Advisor, Building Coordinator, Faculty Chair, MPH Director, track leads, and Community Engagement staff. The Golda Meir Library's health liaison librarian will provide an overview of the collection and research searches during a separate Friday morning session in September. Among the resources that students receive during Orientation include New Graduate Student Orientation packets (MPH/MS and PhD) and a timeline and Checklist/Expectation sheets for the Field Experience and Capstone courses. Student Affairs staff encourage students to attend the Graduate School and Center for International Education (CIE) orientations, which are not mandatory. See ERF H1.5 for sample Orientation materials.

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

Strengths

- Designated professional and faculty advisors for graduate students
- Designated professional staff responsible for data and surveys
- Faculty approval of updated MPH Advising Form (2/2020)
- Implementation of Advising Week (3/23-27/20; 10/19-23/20 and 3/15-19/21; 10/11-15/21)
- Availability of Forms (calendar, advising FAQs, timeline, plans of study) on website (Academics tab)

Challenges

- Delayed response times from both students (checking email, responding; issue of professionalism) and faculty advisors (research activities, availability)
- Limited advising orientation and updates for faculty
- Advising services for non-degree MPH students
- BSPH Advising Satisfaction Survey did not include an overall satisfaction question

Plan

- Finalize transition for Graduate Advisor for professional academic advising to focus faculty advising time in AY 2021-22
- Coordinate with the Faculty Chair to get faculty input in a spring Faculty Council meeting regarding advising orientation and updates
- Implement revised BSPH Advising Survey to include an overall advising satisfaction question before distribution in Fall 2021 semester

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.

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.**

All public health students have access to their advisors, faculty members, the monthly student newsletter with a compilation of active job postings, and UWM resources for career advising.

Undergraduate Career Advising
Undergraduate students are able to use the university's Career Planning and Resource Center (CPaRC). Students can access online and in-person assessment tools to help match their interests, values, and skills with majors and careers. CPaRC supports efforts to find employment and internships, and to develop communication, leadership, problem-solving and other skills to showcase on resumes or in graduate school essays. CPaRC also provides access to employers interested in connecting through Job Shadowing, Professional Networking, Information Sessions and Career Fairs. In addition, students work with academic advisors to find internships and part-time jobs to gain experience while in school. For example, a student was interested in an internship in Chicago, and the Academic Advisor provided links to resources and suggested a faculty member with connections in Chicago as a good contact.

The BSPH curriculum incorporates opportunities for career advising. The PH 100 course (New Student Experience in Public Health) includes resume writing, public health career research, a community panel, and a graduate student panel. PH 600/Integrative Experience includes a 120-hour integrative experience within a community organization, continued resume work, and a mock interview prior to graduation.

Graduate Career Advising
<u>MPH Students</u>
Career counseling is provided for MPH students in a variety of ways. First, the Faculty Advisor functions as the primary career mentor. Since the Track Lead takes into consideration student interests when matching students with faculty advisors, faculty advisors provide students with networking opportunities and help identifying relevant Field Experience preceptors and Capstone project partners. As the Field Experience is a potential opportunity for employment, faculty advisors play a role in how students think about this placement in the context of their career goals. In addition, faculty advisors write letters of recommendation as students apply to positions during their final semester. The MPH Advising Policy and Procedures described above in H1.1 provide Faculty Advisors with resources to structure their advising conversations each semester to focus on career placement outcomes after graduation.

The Zilber School offers professional development opportunities to students. For example, students are required to complete the CITI training prior to beginning the Field Experience. During

Orientation and the required Field Experience workshops, the MPH Director and Community Engagement staff underscore the value of this time with the placement organization for networking and even possible employment. During the Field Experience placement process, the Community Engagement Coordinator may offer advice about resumes. The Capstone course includes several important opportunities. Students engage with an MPH alumni panel who share their leadership and career paths. Students also participate in a Mock Interview event to assist students in preparing for their job searches. Alumni and community partners serve as interviewers. The students apply to actual public health positions, and they are encouraged to get input on their resumes from the campus Career Planning and Resource Center (CPaRC). The interviews are structured to include time for the interviewers to share feedback with the students. Prior to the pandemic, students and interviewers would gather for a networking reception, and the school hopes to resume the reception in spring 2022. Based on student feedback during the Spring 2021 MPH Town Hall, faculty are considering whether the Mock Interview event should occur during the Field Experience rather than in the Capstone course that is taken in the last semester. Further work on the placement of professional development activities will occur in the context of ongoing discussion about the Capstone course structure (See D7.6.).

MS Students

The Biostatistics Track faculty assign MS students to faculty advisors based on shared research interests. They meet with their advisees before the start of each semester to review course selection and update the study plan. In addition, faculty advisors provide guidance for polishing skills in data analysis, programming, and communicating results based on the student's specific needs in course work and for the thesis. Faculty and students also exchange emails as needed. Faculty advisors share potential job opportunities in particular industry organizations or academia drawing on personal and Biostats alumni networks.

PhD Students

Faculty in the tracks with PhD programs assign students to major professors (advisors) based on research interests. Over the course of their time together, faculty advisors mentor their students on preliminary exam preparation, on dissertation research, advise on the doctoral committee, and engage in conversations about different career opportunities. The advisors write letters of recommendation for post-doctoral and other positions.

Alumni Career Advising

Although the school has no formal alumni career advising program, faculty are available to discuss career options, recommend job positions, and provide letters of recommendation as alumni contact them. Alumni also receive the student Newsletter that contains job postings from a range of local, state, and national sources. The Academic Affairs staff have revised how contact information will be collected from graduates, and additional work for ways to keep in more regular touch is planned for the summer.

2) **Explain how individuals providing career advising are selected and oriented to their roles and responsibilities.**

Faculty advisors are selected differently for the undergraduate and graduate programs. At the undergraduate level, the Dean hired the two professional advisors through a search process. They both came to the Zilber School with prior advising experience at UWM. So, their knowledge of the campus is an asset for connections to resources. For example, the advisors draw extensively on CPaRC for resources for students, referring them there for information on resumes and interviews as well as job postings. In their own meetings with the BSPH students, the advisors suggest strategies for approaching the job search as well as counsel them about specific positions. The advisors draw on campus resources for trainings to enhance their skills in this area.

The professional advisor for the graduate students was an existing staff member who took on advising duties as overload when our Student Services Coordinator resigned. She was oriented

to the role by an experienced graduate advisor in the College of Nursing. Through a restructuring of the Student Services Coordinator position, an opportunity became available for the existing staff member to take on the graduate advising role permanently.

At the Master's level, Track leads or track faculty assign students to faculty advisors based on student interests. The advisors provide both academic and career advising. Student Services staff provide updates at Faculty Council meetings and prepare materials including timelines and calendars for the faculty. Faculty Advisors know about the campus CPaRC and can refer their students there. Advisors also receive the Student Newsletter with job announcements. In this way, they are able to recommend certain positions based on the student's interests and career goals.

At the doctoral level, the Faculty Advisors are the primary support for the students. They also benefit from updates at Faculty Council meetings, and other faculty in the track may serve as resources for career advising for particular students.

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.

Example #1 – Undergraduate Career Advising Services

- PH 600 Integrative Experience; Mock Interviews - 3 undergraduates in Fall 2020 (November 10, 2020); 6 undergraduates in Spring 2021 (April 13, 2021); 3 undergraduates in Fall 2021 (November 10 – December 10, 2021)
- PH 100 New Student Experience in Public Health; Resume workshops – 8 undergraduates in Fall 2020

Example #2 – MPH Program Career Advising Services
In Spring 2020, the Senior Special Lecturer reviewed the cover letter and resume for a Capstone student applying for a City of Milwaukee Health Department position. In addition, the Senior Special Lecturer and the student did a virtual meeting to review possible interview questions and prepare for the interview. The student was hired for the position.

Example #3 – MPH Program Career Advising Services
In spring 2020, a faculty member in the Biostatistics Track had an MPH student working as a Research Assistant. The faculty member works with faculty in several departments at the Medical College of Wisconsin and advised the student to search any open positions for biostatisticians. Of the few positions the student found, one was in a center where the faculty member knew both the PhD statistician and center director. The faculty member told the student to apply for that position and use him as a reference. The student immediately got that job.

Example #4 – MPH Program Career Advising Services
In Spring 2017 and 2019, an Epidemiology Track Faculty Advisor advised two Capstone students to apply for the Wisconsin Population Health Fellowship at UW-Madison. The Faculty Advisor wrote letters of recommendation for both students, and both students were accepted into the two-year fellowship in their respective cohorts.

Example #5 – Alumni Career Advising Services
In Summer 2021, an Epidemiology Track Faculty member met with an alumnus (MPH 2018) who wanted to discuss doctoral programs. The alumnus is considering applying to the Zilber School PhD in Epidemiology Program. This same Faculty Advisor also had an email exchange about epidemiology doctoral programs with an alumnus who graduated in 2019. This student has not yet determined his plan.

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.

BSPH Career Advising

For the BSPH Program, Student Services staff distributed the first Graduation Surveys in Fall 2020 and Spring 2021. Most likely due to the pandemic, the response rate was low (33%; 3/9). These results are of limited value as so few students responded. This survey was not connected to a particular course. In the fall, the UPC decided to connect this survey to the PH 600 Integrative Experience, and the two students who were graduating completed the survey.

MPH Career Advising

In the Graduation Survey (see ERF H1.4), students are asked in Question #20 to rate their overall satisfaction with the quality of 11 items related to the MPH Program, including Student Services/Career Advising. Satisfaction is defined as Very Satisfied (1) and Satisfied (2) on a 5-point Likert Scale. The response rates for graduates in 2019 and 2020 were deemed to be too low to be meaningful. In both years only a small number of the total students completing the survey responded to this particular item. Among 2021 graduates, meanwhile, only 28% expressed satisfaction with Student Services/Career Advising. This low rate in 2021 may in part be explained by the pandemic, as students and faculty met virtually, and other demands on students and faculty alike may have complicated availability and scheduling.

The school has implemented two specific changes to address student concerns related to student services/career advising. One change relates to the MPH advising process. The revised MPH Advising Form approved by the faculty in February 2020 (see ERF H1.4) has helped focus conversations regarding career goals. Beginning with the Field Experience in the Fall One meeting, students are invited to identify possible sites based on their career goals. In the Fall Two meeting, advisors and students talk about networking and job-hunting strategies as well as ideas for the Capstone project related to career goals. In the Spring Two meeting, students are encouraged to plan not only for the job search following graduation but also for post-graduation planning to meet longer-term career goals.

The second change relates to the staffing transition in Student Services. The person in the new Graduate Advisor role is prepared to advise MPH students on general questions about track courses and enrollment, plans of study, and course timing questions. This new approach is designed to give faculty advisors additional time for Field Experience and Capstone planning related to career goals beginning in the first year, and for career advising especially in the second year.

MS and PhD Career Advising

At this time, MS and PhD students do not provide formal feedback on their satisfaction with career advising. They are in close contact with their advisors. The advisors discuss career options, recommend jobs, and provide letters of recommendation. The students also receive the Newsletter, and some of the jobs would be of interest to academic master's and doctoral students.

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

Strengths

- Several opportunities to develop resumes throughout BSPH (PH 100/New Student Experience in Public Health; PH 600/Integrative Experience: Mock Interview events on 11/10/20, 4/13/21, 11/10-12/10/21)
- Opportunity for undergraduate students to create a LinkedIn account in PH 100
- Support from faculty by sharing opportunities for undergrad job and internship opportunities
- Integration of limited professional development activities in Capstone; including successful Mock Interview events in the Capstone Seminar in 2018-2021 (2/22/18, 2/18/19, 2/18/20, 2/22 & 2/23/21; 10/5/21); AND MPH panels 1/28/20; 2/1/21 and 9/14/21 (all alum panelists)
- Regular distribution of job, internship, and fellowship positions in Student Newsletter (to current students and alumni)
- Growing network of alumni for Field Experience and job placement networking
- Community Engagement staff complement faculty advisors to support Field Experience placement process
- Strong connections to the UW-Madison Wisconsin Population Health Fellowship Program (9 graduates over 8 cohorts from 2014-16) and local health departments

Challenges

- Lack of formal system for career services policies and procedures; lack of clarity in faculty and Student Services staff roles for career counseling
- Limited exposure to a range of options for MPH, including opportunities for connections and experiences, and awareness of the CHES, CPH, and REHS exams or the DHHS U.S. Public Health Service Corps
- Awareness of campus resources for graduate students through Career Planning and Resource Center (CPaRC) for resume/interviewing
- Limited staffing to support career services
- Limited formal connections between alums and current students
- Limited networking opportunities during pandemic to attend local, state, and national conferences
- Limited structure for maintaining BSPH and graduate alumni data base
- Low response rate for BSPH Graduation Survey in 2020-21 (first year with program graduates)
- Certain questions in graduate Graduation Survey not as clear as they could be

Plan

- Transitioned Student Services staff member into Graduate Advisor position in Summer 2021 to focus faculty advising time on key areas related to career development: Field Experience (with support from Community Engagement Coordinator), Capstone, and career placement/professional development
- Review career opportunities being shared with students and enhance communication approaches
- Develop and implement an alumni data base for regular communications about jobs, school events, and speaking and preceptor opportunities
- Identify and implement strategies to increase undergraduate Graduation Survey response rates
- Review undergraduate and graduate Graduation Surveys and revise career advising and other questions as needed

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.**

The Zilber School is committed to ensuring a fair and respectful process for students to resolve complaints or grievances involving faculty or staff. Beginning at orientation, both the undergraduate and graduate students are informed about ways to provide input and raise concerns. New undergraduate students receive an Undergraduate Student Handbook, which includes the new Student Complaints policy approved by the UPC in Spring 2021. (See ERF H3.4 for 2020-21 UPC Annual Report.) Students enrolled in PH 100/New Student Experience in Public Health have access to the Handbook in Canvas. They may also meet with their Undergraduate Advisor or Undergraduate Program Director to express any concerns.

Graduate students, meanwhile, learn about the Graduate Student Handbook, which is posted on the school's website under the Academics tab. During orientation Academic Affairs staff highlight different sections of the Handbook, including the section on Complaints, Grievances and Appeals (pp. 98-101). In their comments, the Associate Dean for Academic and Student Affairs and MPH Director also convey their openness to students bringing any matters to their attention. In general, Zilber School administrators, staff, and faculty encourage students to share any concerns with whomever they feel comfortable. Procedures for both undergraduate and graduate students to make informal and formal complaints are described below.

Academic Grievances
If an undergraduate or graduate student believes they have been treated unfairly by a Zilber School representative about an academic matter (e.g., grade, evaluation, graduation decision, scholastic standing), the school has a progressive three-step grievance process: 1) Informal resolution with faculty member/body, 2) Formal grievance addressed to faculty member/body, 3) Formal grievance addressed to Hearing Committee.

Step 1: Informal Resolution with Faculty Member/Body
Ideally, the grievance process begins with a meaningful effort by the student to resolve the issue through informal discussion with the responsible faculty member or representative of the faculty body (thesis committee, dissertation committee, qualifying exam committee, etc.). If the student is not satisfied with the outcome of the informal process, they may seek confidential guidance and consultation from the Academic Advisor, Undergraduate Program Director, or the Associate Dean for Academic and Student Affairs (undergraduate), or from the Student Services Manager, MPH Director, or Associate Dean for Academic and Student Affairs (graduate).

Step 2: Formal Grievance Addressed to Faculty Member/Body
A student can initiate a formal grievance by submitting a written statement to the responsible faculty member/body within 30 working days of the action that prompted the appeal. The written grievance must include:

- A description of the specific nature of the issue, decision, or behavior
- The facts underlying the grievance
- All previous efforts made to address the issue
- The solution sought

- A copy of the formal grievance is sent to the Associate Dean for Academic and Student Affairs.

The faculty member/body has 15 days to respond in writing to the student's formal grievance.

Step: 3 Formal Grievance Addressed to Hearing Committee
If the student is not satisfied with the outcome of the formal grievance addressed to the faculty member/body, the student may file a Formal Grievance with the Zilber School Undergraduate Program Committee (UPC) or Graduate Program Committee (GPC) within 15 working days of receipt of the faculty member/body's written response to the grievance.
The written grievance as addressed to the UPC/GPC must include:

- A description of the specific nature of the issue, decision, or behavior
- The facts underlying the grievance
- Evidence of all previous efforts made to address the issue (including the written response from the responsible faculty member/body)
- The solution sought

Depending on the student's degree, either the UPC or GPC will establish a Grievance Subcommittee to address the issue. If a member of either the UPC or GPC is the faculty member responsible for the decision or behavior at issue, the Faculty Chair will appoint a faculty member for the hearing.

In the event that any of the members of the body hearing the Step 3 appeal were involved in rendering the Step 2 decision being appealed, they must be replaced for the purpose of hearing the Step 3 appeal. Substitute members will be chosen by the Faculty Chair. If the UPC or GPC's decision or behavior is the basis for the grievance, the faculty chair should appoint an ad hoc committee to handle the appeal. The student will receive written notification of the outcome of the Step 2 appeal.

The UPC and GPC Grievance Subcommittees have 30 days to respond to the student's written grievance with the determination in writing. In the case of an undergraduate appeal, if the Step 3 decision is negative, the student may, within 10 working days from the date of notification of that decision, appeal to the Associate Dean for Academic and Students Affairs. The Associate Dean's decision is final. See ERF H3.1a for the Undergraduate Student Complaints, Grievances, and Appeals Policy.

In the case of a graduate student appeal, the student sends the appeal in writing to the Dean of the Graduate School. The student must provide information on the reason for the appeal, substantial evidence in support of the appeal, and the solution sought. The student sends a copy to the Zilber School Associate Dean for Academic Affairs. See ERF H3.1b for the Graduate Students Complaints, and Appeals Policy. See UWM Graduate School Appeal Process below for next steps.

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.

Students may file grievances related to harassment and sexual misconduct under Title IX with the campus Office of Equity and Diversity Services. For Title IX grievances, students may access the reporting form through a link in the Title IX page. This process includes an investigation conducted by UWM, the issuance of a report, a hearing, and a written hearing report. Students may appeal the decision to the UWM Hearing Committee. Students also file grievances related to discrimination with this office. Students would begin this process by filing a Hate/Bias Reporting Form or by contacting the Office in the case of discrimination. Steps in this process include filing a complaint, participating in the investigation process, reviewing the written report with findings, which is sent to the Provost, and receiving the Provost's decision. Students may appeal the Provost's decision to the Board of Regents.

For academic appeals, undergraduate students file the grievance with the Office of the Dean of Students. Graduate students file the grievance with the Graduate Scholastic Appeals Committee in the Graduate School. The procedures for student academic misconduct are described in Chapter UWS 14 (April 2016) in the Wisconsin Statutes. If an instructor concludes that academic misconduct occurred, the instructor prepares a written report for the student. The student may request a hearing with the Academic Misconduct Hearing Committee. If the instructor recommends any disciplinary action, the matter is referred to the unit Investigating Officer, who meets with the student. Based on the Investigating Officer's determination, the student may request a hearing with the Academic Misconduct Hearing Committee. A student may appeal a decision of suspension or expulsion to the Chancellor.

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.

Since 2018 the Zilber School has had three grievances and three grade appeals.

Grievance #1
Nature of complaint: In 2018 a student filed a grievance related to gender identity with the campus Office of Equity/Diversity Services and Dean of Students.
Current status: The Office of Equity/Diversity Services found no gender identity discrimination. The department changed the student's faculty advisor, and the student graduated in fall 2019.

Grievance #2
Nature of complaint: In Fall 2020 a student filed a complaint with the Graduate School about a school policy related to appointment of a dissertation chair.
Current status: The Graduate School determined that there was no basis for a grievance, and the student dropped the issue.

Grievance #3
Nature of complaint: In Fall 2020 the Office of Equity/Diversity Services filed a racial discrimination grievance on behalf of a student.
Current status: In Spring 2021 Office of Equity/Diversity Services determined that no racial discrimination was found.

Grade Appeals
Appeal #1
Nature of complaint: At the end of the Spring 2018 semester, a student appealed a course grade to the Faculty Chair. MPH Director met with student and faculty member.
Current status: Resolved with input from Faculty Chair and MPH Director

Appeal #2
Nature of complaint: At the end of the Spring 2018 semester, a student appealed a course grade to the Faculty Chair. MPH Director met with student and faculty member
Current status: Resolved with input from Faculty Chair and MPH Director

Appeal #3
Nature of complaint: At the end of the Fall 2020 semester, a student appealed a course grade.
Current status: After a delay in reaching the instructor, the student and instructor were connected for the first step, informal resolution with the faculty member. The student then submitted a formal grievance to the faculty member. Upon review, the faculty member found a calculation error and changed the grade.

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

Strengths

- School has undergraduate and graduate complaints, grievances, and appeals policies in student handbooks on the website
- Students have access to campus resources, policies, and processes for Title IX, discrimination, and academic misconduct concerns, with designated people at different points in these processes
- Students have different mechanisms for raising issues with school administrators, including the spring Student-Faculty Feedback process as well as access to meet with the Acting Dean/Associate Dean for Academic and Student Affairs, MPH Director, Undergraduate Program Director, and faculty

Challenges

- Lack of clarity in graduate Grievance policy identified through Spring 2020 PhD Town Hall Process

Plans for Improvement

- Create GPC sub-group to review and revise the Grievance policy as needed in Spring 2022, based on discussion of suggested areas for revision and next steps at 11/9/21 and 12/21/21 meetings. (See ERF H3.4 for GPC 2020-21 draft GPC Annual Report and 11/9/21 and 12/21/21 GPC minutes.)

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.**

Overview
The Zilber School seeks students who want to make a difference in the public health field. The BSPH searches for students interested in learning how to diagnose, analyze, and solve a range of public health challenges. The MPH targets students seeking to build practical knowledge and skills, including the applied use of public health research, to promote population health and health equity. The PhD in Public Health seeks students interested in either (1) researching genetics, bioinformatics, and big data science (Biostatistics Concentration) or (2) becoming scientist-practitioners, able to lead interdisciplinary research and work with a range of communities on pressing population health issues (CBHP Concentration). The PhD in Environmental Health Sciences seeks students interested in research focusing on the environmental determinants of disease and the interaction of environmental factors – biological agents, chemicals, and physical impacts – with individual facets of disease susceptibility such as genetics, age, and development. The PhD in Epidemiology seeks students interested in independent research that can be translated into interventions and policies to promote population health, health equity, and social justice. Recruitment materials and presentations/virtual fairs highlight these features of the school's programs.

The Zilber School has significant private donor funding for scholarships that we use for both student recruitment and retention. For example, in the 2022-23 academic year we plan to award $40,500 for recruitment and $24,000 for retention of BSPH students, $188,500 for recruitment and $27,000 for retention of MPH/MS students, and $98,700 for recruitment and $20,000 (Zilber School funds) for retention of doctoral students. Through these donations, we are also able to consider emergency scholarships to students to promote re-enrollment.

Undergraduate and graduate student recruitment activities are described below.

Undergraduate Recruitment
The Zilber School of Public Health's BSPH Program recruits new freshmen with the support of the UWM Office of Undergraduate Admissions. While Milwaukee-area, Wisconsin and Minnesota students are targeted, the team also reaches out nationally to students who identify from under-represented populations. The Zilber School BSPH recruitment team includes the two advisors and an undergraduate peer recruiter. The team attends campus events on behalf of the BSPH program throughout the year. These include weekly information sessions, along with visit days and targeted population events as well. The Bachelor's program also partners with the College of Nursing and College of Health Sciences for combined recruitment efforts. One advisor attends high school classroom presentations, college fairs and other campus-related events to target current high school students in health-related classrooms. They also attend the Health Occupations Students of America (HOSA) Annual Conference and other health-related opportunities that pop up. Independently, Zilber reaches out to social justice- related K-12 classes in Wisconsin to share presentations as well. The second advisor, meanwhile, works with prospective transfer students from the campuses in Waukesha and Washington Counties, Milwaukee Area Technical College (MATC), and other transfer universities to establish pathways to the undergraduate public health program.

When the Bachelor of Science in public health was added to the Zilber School's degree offerings in Spring 2018, the recruitment team created undergraduate-specific recruitment materials. Among these materials were a flyer to use at recruitment events and a poster to distribute to high

school classrooms and advisors' offices. The BSPH flyer and poster are available in English and Spanish. Additional flyers are created as needed. The Senior Communications Account Executive works with colleagues in University Relations to maintain a unique brand that aligns with the greater UWM brand. The Student Services Coordinator ensures recruitment messaging focuses on students, alumni, and faculty stories, state-of-the-art facilities, and city highlights. See ERF H4.1 for BSPH flyers and posters in English and Spanish.

In addition to print materials, the school runs annual digital marketing campaigns to promote all the degree programs to prospective students. These campaigns run from September through May as Google paid search ads as well as paid advertising on Facebook, Instagram, YouTube, and LinkedIn. The ads direct prospective BSPH students to a landing page where they can request more information and connect with recruitment staff.

Starting in Spring 2020 recruitment shifted to a completely virtual format. This impacted the number of students with whom recruiters were able to have personalized, one-on-one conversations. High school visits were switched to Zoom, and the team was able to visit more schools due to the virtual environment and time saved on travel. Adapting meant sending more information to students via email and with videos. Recruiters called students and offered virtual events. Funds were also dedicated for digital media advertising and other supplies during the fall 2020/spring 2021 recruitment cycle.

The recruiting team has developed the following seven overarching undergraduate recruitment goals for the 2021-22 cycle.

- Visit a total of 25-30 high school classrooms (focusing on the Milwaukee area) either virtually or in-person
- Host at least one Pre-Health Day with the Colleges of Health Sciences and Nursing to bring students to campus and tour the labs
- Contact 5-10 Milwaukee public health-related groups to distribute information about our program throughout the community
- Participate in OUA recruitment opportunities (info sessions, admitted student days, etc.)
- Develop faculty participation in important, large-scale recruitment events
- Continue to partner with the UWM campuses in Waukesha and Washington Counties
- Continue to develop of partnerships with 2-year schools and other common transfer institutions, including Milwaukee Area Technical College (MATC)

The Bachelor's degree program staff contacts admitted students beginning in March through various marketing methods, emails, and events. The Partners for Health Team hosts yield events related to housing, financial aid, and other campus resources. These events are in addition to yield activities that the Office of Undergraduate Admissions does as well. Retention events for enrolled students occur each semester along with advising to avoid class enrollment and plan errors. Advisors email their advisees regularly and host separate retention events in the KIRC as well. Examples of past events include cookie decorating, pumpkin decorating, and gatherings attended by other students, staff, and faculty.

Graduate Student Recruitment

With planning and implementation direction from the Student Services Coordinator, a team of four staff carry out successful student recruitment. The Graduate Advisor is responsible for responding to prospective students via email, phone, in-person meetings and attending recruitment events. The Peer Recruiter, a current PhD student and MPH alum, attends graduate fairs and conferences, gives tours, hosts in-person and online info sessions, manages social media posts, and fills in as appropriate. The Admissions Lead, a current PhD student and MPH alum, manages our SOPHAS application system, attends graduate fairs and conferences, give tours, hosts online info sessions, and fills in as appropriate. A dedicated marketing professional from University Relations splits time between UWM's School of Education (37.5%) and the Zilber

School (50%). This model supports close work with the University Relations team, which includes website developers, videographers, photographers, graphic designers, and writers.

The Student Services staff use a variety of strategies for recruitment for all graduate degrees. The school targets students from Wisconsin, Minnesota, Midwest Student Exchange Program (MSEP) states as well as international students and students nationally who identify as persons from under-represented populations. To increase the funnel of prospective students, staff activities include hosting monthly information sessions, exhibiting at local Graduate School fairs and public health-related conferences, running social media ads, and conducting structured email/mail campaigns to all prospects. Monthly info sessions with the school's graduate recruiter cover each of the academic programs, and they are held at the downtown Zilber School building and on online.

The Six Touches Approach: From initial contact, prospective students receive six touches encouraging them to apply and enroll at UWM's Zilber School. These six touches are a combination of mailed packets, phone calls, personalized template emails, and unique marketing tokens. Slate CRM facilitates this approach with event scheduling and event participation tracking, template uploads, and mass emailing. It has been helpful to coordinate and track attendance at prospective student information sessions. A Slate contact form has been linked on the website. SOPHAS also facilitates auto-email campaigns to prospective applicants. Given the rolling MPH admission deadline, related follow-up strategies include additional marketing to students from MSEP states, which allows students from participating states to pay 150% of Wisconsin resident tuition cost. Finally, with UWM's Graduate School requirement that applicants admitted through SOPHAS submit a UW System application and pay a $75 fee, the recruitment budget includes 50 waivers of this fee.

Online Presence

Significant attention has been paid to building the Zilber School's brand awareness in public health through its online presence. With dedicated communications staff, the school has been able to significantly increase content available to post online. Whenever the Zilber School's faculty, students, and alumni are recognized by University Relations, the communications staff member links the story on our *In the News* and social media accounts (Facebook, Instagram, Twitter, and YouTube). For example, prospective doctoral students would be able to read about a particular faculty member's research in this page, and based on their own interests, reach out to the school, and ultimately the faculty member, for more information. The importance of this updated content has come across in informal focus groups with students to get feedback on the recruitment plan.

The team runs annual digital marketing campaigns to promote the graduate programs to prospective students. These campaigns run from September through May as Google paid search ads, as well as paid advertising on Facebook, Instagram, YouTube, and LinkedIn. The ads direct prospective students to a landing page where they can request more information and connect with recruitment staff at the school.

During 2020 and 2021, the marketing and recruitment staff developed a series of student testimonial videos, including a longer "What Is Public Health?" video featuring current Zilber School doctoral students and MPH alumni talking about what drew them to the public health field, and which issues they most want to address as public health professionals. The videos are designed to help prospective students "find themselves in public health" and develop a deeper understanding of what their career in public health could look like.

During the pandemic, for the Fall 2020/Spring 2021 recruitment cycle, the school dedicated additional funds for digital media advertising. In Spring 2021, considerable search engine optimization work was done on the school's academic program pages, and another upgrade to the university and unit web sites was completed in November.

Below is a summary of the key online platforms used in recruitment:

- The primary web page for prospective students is: https://uwm.edu/publichealth/
- We also maintain the aforementioned Facebook page at: https://www.facebook.com/publichealthUWM/
- Twitter: https://twitter.com/publichealthuwm
- Instagram: https://www.instagram.com/uwm_public_health/
- YouTube: https://www.youtube.com/channel/UCeVM17Y8ilJuD2BIBNz8jHw
- The UWM Graduate School page at: https://uwm.edu/graduateschool/
- The Registrar's Office maintains the Schedule of Classes http://www4.uwm.edu/schedule/ and the Academic Calendar can be found at: https://uwm.edu/registrar/dates-deadlines/

Print Materials

Initial Graduate Packet: Print materials are used in mail campaigns and during in-person recruitment events. The initial packet includes a flyer on each of the graduate programs and the UWM Graduate School Viewbook. Each academic program flyer includes a program/track overview, curriculum information, cost of attendance, funding availability and application process, and admission deadlines and directions to apply. They feature photos of students and the Zilber School's facilities. The flyers are easily edited by University Relations staff and printable on regular 8.5 by 11 paper. The Viewbook is the most elaborate piece in the Initial Packet, and the Graduate School has provided it in-kind at the request of the Zilber School of Public Health. See ERF H4.1 for the MPH, MS, and PhD flyers as well as a flyer with general facts about the Zilber School.

MPH Admissions Packet: The admissions packet includes a Zilber School Brochure and a one-pager that shares building highlights. The main facilities in downtown Milwaukee are Gold LEED-certified. The building's central location close to community-based agencies and its sustainable design are selling points for prospective students interested in social and environmental justice, the thematic statement marketed during the Zilber School's founding. The university supports each school and college to develop a brochure from a template, which the school sends as part of the admission packet. This school brochure includes academic program information, general university details, and highlights about the City of Milwaukee, and it features photos of community partners, faculty, students, and alumni. Central university funds cover the cost of printing a limited amount of the Zilber School brochures annually.

2) Provide a statement of admissions policies and procedures. If these differ by degree (eg, bachelor's vs. graduate degrees), a description should be provided for each.

Admissions policies and procedures for five degrees – BSPH, MPH, MPH-MSW, MS in Biostatistics, and the doctoral programs – are presented below.

Undergraduate Program

The UWM Office of Undergraduate Admissions handles all admissions to Bachelor degree programs for transfers from other institutions and incoming freshmen. Student can indicate on their application that they wish to major in Public Health, and the Public Health advisors are notified of these applications for follow-up at the school level. The admissions cycle begins on September 1 for the following fall semester. In March, schools and colleges begin hosting accepted student events, contacting students to share more details about the program and answer any questions, and awarding scholarships. Students must apply by August 1 to start in the fall semester; however, students may start in the spring or summer semesters. UWM undergraduate admissions policies and procedures can be found here.

Currently, students are not required to submit ACT or SAT scores to enhance access to higher education, nor is there an undergraduate application fee now. The Office of Undergraduate Admissions (OUA) considers high school courses taken, class rank (if available), grades in courses related to the proposed major, and GPA. There is no stated minimum GPA for admissions as a new freshman. Rather OUA applies a holistic approach to each student's situation. Students wishing to transfer are automatically admitted if they have completed 24 college credits, have a minimum 2.0 GPA, and are in good standing at the institution(s).

The Dean, Undergraduate advisors, and the program director consider admitted students for a few Zilber School undergraduate scholarships. GPA, level of need, and the most recent FASFA form are considered while deciding on distributing funds.

Currently, BSPH students have an option for early admission into the MPH Program. The Accelerated Master's Degree, with a 3 ½ plus 1 ½ format (3 ½ + 1 ½), was approved by the GPC on 3/23/20 and by the Faculty Council on 3/27/20. The campus approval process was completed late Spring 2020. This option enables qualified BSPH students to begin taking MPH courses in the fall of their senior year and be a graduate student in the spring of their senior year. Admission requirements include a minimum GPA of 3.0. To apply with automatic admission into the program, BSPH students must have a cumulative GPA of 3.7 or higher. All students applying to the program must submit an application as well as a Statement of Purpose. Students who are not automatically admitted must provide two letters of recommendation with their application. Applications are due by February 1st. The UPC makes the admissions decisions.

Graduate Programs
Admissions policies and procedures for the MPH, MPH-MSW, MS in Biostatistics, and the PhD programs are described below. Academic Affairs staff establish initial application deadlines based on the degree. The MPH and MS in Biostatistics had a rolling admissions final deadline of July 14 for Fall 2021. For the Spring 2022 cohort, the deadline was September 30, 2021. For the cohort enrolling in Fall 2022, the priority dates were November 30, 2021 (Epidemiology PhD) and January 8, 2022 (MPH, MPH-MSW, MS, CBHP and EHS PhD Programs). MPH and MS applicants seeking funding were required to apply by this deadline. Applicants who complete applications by the initial deadline are informed of their admission status by the first week in March. MPH applications will also be accepted for Fall 2022 on a rolling basis through July 2022. All applications must be completed in SOPHAS.

Tracks review applicants who are seeking campus scholarships or fellowships to make recommendations by the campus deadline. The Dean, Graduate Advisor, and track faculty review admitted students for available Zilber School scholarship funds. These awards are coordinated with the school finance staff.

<u>MPH Program</u>
As of April 2020, the school removed the GRE requirement from the MPH admission requirements. The Graduate School requires a minimum 2.75 undergraduate GPA. Faculty in each track determine admissions guidelines and criteria, and procedures for review of the applications. They post their decisions in SOPHAS, and the Admissions Lead begins the acceptance process. Admitted students are notified by email that they have been accepted and that they need to apply to the UWM Graduate School (Panthera system). The Zilber School waives the $75 application fee for up to 50 students. The Peer and Graduate Recruiters begin reaching out to answer questions and support their enrollment. Students receive an admissions packet that includes any offer of scholarship or fellowship, campus resources, MPH/PhD policies and competencies, and the appropriate plan of study.

Applicants denied by the track(s) to which they initially applied are moved into a general pool. The MPH Director coordinates this process, during which time the other tracks then have a short window to review these applications. Sometimes, the faculty in another track see a better fit after

reading the short essays, reference letters, and resume. It is possible for a student to be denied by the track to which s/he applies and then to be admitted into a different track. In the case that no track recommends admission to an applicant in the general pool, the person is denied admission, and the Admissions Coordinator sends the student a letter.

MPH-MSW Program

The MPH-MSW coordinated degree is managed jointly by the Zilber School and the Helen Bader School of Social Welfare. Both the MPH and Social Work Programs review applications to the coordinated MPH-MSW degree. Applicants must meet the admissions criteria for both schools to be accepted into the coordinated degree program. The Graduate School requires all applicants to have a minimum undergraduate cumulative GPA of 2.75. As the MPH Program no longer requires the GRE, prospective students write an essay and submit a resume and three letters of recommendation. If an applicant is not accepted into the coordinated MPH-MSW program, they can choose to accept admission to either the MPH or MSW Program, depending on which program accepted them.

In the Zilber School, the MPH Director and CBHP Track Lead review all the applications. They consider the student's overall academic record, GPA, fit with the MPH track they chose, and expression of commitment to the integration of public health and social work principles of social justice and social determinants of health in the context of families, communities, organizations, and the broader society. In cases where staff in both schools have questions about the fit, they meet to discuss the applicant's materials and make a final decision together.

MS in Biostatistics

For admissions into the MS program in Biostatistics, Track faculty expect candidates to have a general mathematical background with at least two semesters of Calculus. Students with a bachelor's degree in Mathematics or closely related field are preferred. In addition, faculty expect students to place above the 50th percentile in their quantitative GRE exam. In their letter of intent, faculty expect students to elaborate on their background in mathematics and statistics and any experience they have in a programming environment or language. Students should also express an interest in a career in Biostatistics or in public health or biomedical research.

Faculty review applicants and enter decisions into SOPHAS. The Admissions Coordinator sends out acceptance / denial letters. The faculty do not personally contact each student to encourage them to enroll.

PhD Programs

The CBHP, EHS, and Epi PhD programs admit exceptional applicants with no prior master's degree. It is typical, however, for admitted students to have earned an MPH or related degree. According to Graduate School requirements, applicants must have at least a 2.75 GPA. Track faculty establish the admissions criteria and define the review process. They report their decisions to the Admissions Lead, who initiates the letter (acceptance or denial).

The PhD programs have a two-step admissions process that includes a PhD Interview Day. In the first round, the tracks review their PhD applicants and then enter an initial recommendation whether to invite to interview into SOPHAS. Some applicants are denied admission during this initial round. Others are denied admission after the interviews. Acceptance letters to doctoral students include offers of any scholarships or fellowships as well as Teaching or Research Assistant positions.

3) **Select at least one of the measures that is meaningful to the school and demonstrates its success in enrolling a qualified student body. Provide a target and data from the last three years in the format of Template H4-1. In addition to at least one from the list, the school may add measures that are significant to its own mission and context.**

The Zilber School has identified the percentage of priority under-represented populations enrolling in the school as the measure for ensuring a qualified student body. Three priority population groups are African Americans, Latinx, and Southeast (SE) Asian/Hmong. These priority populations are based on city demographics and UWM's mission as an access university. The goal to enhance the diversity of the city and state's public health workforce is consistent with the school's mission of commitment to social and environmental justice.

Over the past three years, the Zilber School has been able to recruit a diverse student body, with at least 20% of the entire student body from the priority populations as presented in Table H4-1 below. The Zilber School is the only accredited school of public health in Wisconsin, and the fact that it is located in a public university in the state's largest city appeals to students who are committed to health equity and drawn to the school's mission of social and environmental justice.

Table H4-1 Outcome Measures for Recruitment and Admissions				
Outcome Measure	**Target**	**2018**	**2019**	**2020**
Percent of African American, Latinx, Hmong students by year across all degree programs	**20%**	20%	22%	22%

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

Strengths

- Potential for growth in BSPH, MPH, MPH-MSW and MS programs
- Implementation of several strategies to improve recruiting and admissions practices (Updated website, updated recruiting materials, information sessions, undergraduate and graduate peer recruiters)
- Implementation of best-practice tactics to improve student retention, including a) revision of website and b) new recruitment materials to accurately depict the programs
- Growth in funds for scholarships following accreditation in 2017
- New donor funds for undergraduate marketing and recruitment
- MPH/MS rolling admissions after priority deadline
- MPH spring admissions (Spring 2021 and 2022 cohorts)

Challenges

- Adequate financial support for students to compete effectively with other accredited programs
- Difficulty securing new donor funds for scholarships during pandemic
- Difficulty identifying effective virtual recruiting strategies for BSPH and Graduate programs
- Student Services Coordinator position, which oversees recruitment and admissions, is vacant with part-time support from Assistant Dean for Student Services in the UWM College of Nursing; hiring plan pending further 2030 reorganization discussions and potential acquisition of existing staff.
- Statewide austerity measures affecting UW System and governmental public health workforce opportunities
- Continued review of recruitment strategies to ensure a diverse student body
- Review of admission procedures, including how to scale up quality assurance

- Difficulty for students in navigating SOPHAS and UWM Graduate School Panthera application processes

Plan

- Pursue multi-pronged approach for securing adequate student financial support:
    - donor contributions post accreditation,
    - RA positions on faculty research grants, and
    - applications for federal training and research grants post accreditation
- Utilize Peer Recruiters better by integrating their activities into the recruitment plan for the Fall 2022 admissions cycle; explore cost sharing possibilities with other campus units in the areas related to student services, recruitment, and admissions
- Continue spring admissions cycle for MPH students to increase enrollments
- Continue to include best practice tactics to recruit students who are underrepresented in higher education and graduate school
- Address students' concerns regarding SOPHAS and Panthera on a case-by-case basis; admitted students must complete Panthera application to be entered into UWM system
- Streamline scholarship process for graduate students

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.**

   The Zilber School website is a source of information for all degree programs. Content on the school website and in printed materials is consistent. All the degree programs are accessed through the Academics tab, and each program page includes information organized in five tabs: About, Curriculum, Career, Faculty, and Research. The UWM 2021-22 Catalog is another source of information for all of the school's degree programs.

   Academic Calendar
   All Zilber School programs follow the UWM academic calendar. The Office of the Secretary of the University publishes the calendars. The AY 2021-22 and 2022-23 calendars are posted here. The Office of the Registrar maintains comprehensive information on its Dates and Deadlines web page about important dates for a range of topics, including financial aid, registration, and adding/dropping courses. Students can access university calendars here. Students receive reminders regarding important dates regularly from Student Services staff.

   Admission Policies
   The Zilber School is part of the campus' web platforms for recruitment and admissions and academic programs including curriculum and degree requirements. Here is a summary of the key online platforms used in recruitment. The primary web page for prospective students is https://catalog.uwm.edu/programs/. The programs are listed alphabetically, including Biostatistics, MS; Environmental Health Sciences, PhD; Epidemiology, PhD; and nine under Public Health (BS, MPH in five tracks, and two doctoral programs).

   Admission Requirements: https://uwm.edu/publichealth/students/future/admission/

   We also maintain the aforementioned social media pages (see links in H4).

   Zilber School Handbooks
   The Zilber School Handbook houses school and program information and is given to incoming students at the time they begin their undergraduate and graduate program. Faculty and staff update the Handbook throughout the academic year and inform students of any policy/procedural changes. Grading policies, academic integrity, and degree completion requirements are located in the handbook. Grading policies and academic integrity are also located on each syllabus.

   Undergraduate Handbook—see ERF H5.1; topics of grading policy, academic integrity, degree completion requirements are covered
   Undergraduate Syllabus (sample; see ERF H5.1)—link to grading policy and link to academic integrity are included in document

   Graduate Handbook—topics of grading policy, academic integrity, degree completion requirements covered in Handbook