

W



UW School of Public Health Re-Envisioning the Master of Public Health (MPH) Program

**Phase 2 Steering Committee Report
to Executive Sponsors
July 15, 2019**



Table of Contents

| | |
|--|----|
| Participants in the Phase 2 MPH Re-Envisioning Project..... | 3 |
| Executive Summary of Phase 2 Activities | 6 |
| Recap of MPH Re-Envisioning Phase 1 Activities..... | 11 |
| MPH Re-Envisioning Phase 2 Activities | 12 |
| Core Courses and Syllabi..... | 13 |
| Cross-Cutting Themes | 17 |
| MPH Applied Practice Experience..... | 18 |
| MPH Integrative Learning Experience..... | 20 |
| Final Summary and Next Steps..... | 22 |
| Establishment of Phase 3 Steering Committee..... | 22 |
| Measurement and Evaluation | 25 |
| Practice Community Engagement | 26 |
| Support for the MPH Common Core | 27 |
| Appendices | 31 |
| Appendix 1. Charge to MPH Re-Envisioning Steering Committee, Phase 2..... | 32 |
| Appendix 2. Syllabus—PHI 511, Foundations of Public Health | 35 |
| Appendix 3. Syllabus—PHI 512, Analytic Skills for Public Health I..... | 44 |
| Appendix 4. Syllabus—PHI 513, Analytic Skills for Public Health II..... | 51 |
| Appendix 5. Syllabus—PHI 514, Determinants of Health | 57 |
| Appendix 6. Syllabus—PHI 515, Implementing Public Health Interventions | 66 |
| Appendix 7. Syllabus—PHI 516, Public Health Practice..... | 75 |
| Appendix 8. Guidelines for Out-of-Class-Time | 81 |
| Appendix 9. Memo to Curriculum and Education Policy Committee | 84 |
| Appendix 10. Boot Camp Agenda..... | 87 |
| Appendix 11. Cross-Cutting Themes Chart..... | 89 |
| Appendix 12. Council on Education in Public Health Competencies Chart..... | 92 |

Participants in the Phase 2 MPH Re-Envisioning Project

Steering Committee Members

| | |
|-------------------------|---|
| Carey Farquhar | Professor, Global Health, Committee Chair |
| Shirley A. A. Beresford | Senior Associate Dean, SPH ex-officio; Committee Associate Chair |
| Janet Baseman | Associate Dean, Public Health Practice, SPH ex-officio |
| Victoria Gardner | Assistant Dean, Equity, Diversity, and Inclusion, SPH ex-officio |
| Brandon Guthrie | Assistant Professor, Epidemiology |
| Jeff Hodson | Director, Communications, SPH ex-officio |
| James Hughes | Professor, Biostatistics |
| J. Scott Meschke | Professor and Assistant Chair, Environmental and Occupational Health Sciences |
| Donald Patrick | Professor, Health Services |
| Gracious Gamiao | Student Representative, Health Services |
| Alexandra Kossik | Student Representative, Environmental and Occupational Health Sciences |
| Erin Morgan | Student Representative, Epidemiology |
| Divya Pahwa | Student Representative, Nutritional Sciences |
| Shadae Paul | Student Representative, Global Health |
| Kimberly Hay | Project Manager, Office of the Dean |

Executive Sponsors—Office of the Dean

| | |
|-------------------------|-----------------------|
| Hilary Godwin | Dean |
| Shirley A. A. Beresford | Senior Associate Dean |

Executive Sponsors—Department Chairs

| | |
|-------------------|---|
| Jeffrey Harris | Professor, Health Services |
| Stephen E. Hawes | Professor, Epidemiology |
| Patrick Heagerty | Professor, Biostatistics |
| Judith Wasserheit | Professor, Global Health |
| Michael Yost | Professor, Environmental and Occupational Health Sciences |

Executive Sponsors—Curriculum and Educational Policy Committee

| | |
|----------------------|---|
| Michael E. Rosenfeld | Professor, Environmental and Occupational Health Sciences, Chair |
| James Condon | Senior Lecturer, Health Services |
| Carey Farquhar | Professor, Global Health |
| Alison Fohner | Assistant Professor, Epidemiology (Public Health Genetics Program) |
| Anne Lund | Senior Lecturer, Epidemiology (Nutritional Sciences Program) |
| Sara Mackenzie | Senior Lecturer, Health Services (Public Health-Global Health Major) |
| Kurt O'Brien | Senior Lecturer, Health Services |
| Juanita Ricks | Director, Student and Academic Services, Office of the Dean, Ex Officio |
| Ali Rowhani-Rahbar | Associate Professor, Epidemiology |
| Adam A. Szpiro | Associate Professor, Biostatistics |

Syllabi Common Core Course Working Group Members¹

| | First | Last | Role | Department represented |
|----------------|-----------|----------------|-------------------------|--|
| PHI 511 | Carey | Farquhar | steering/course co-lead | Global Health |
| | Shirley | Beresford | steering/course co-lead | Office of the Dean |
| | Wendy | Barrington | member | Epidemiology |
| | Tania | Busch Isaksen | member | Environmental and Occupational Health Sciences |
| | Joana | Cunha-Cruz | member | Health Services |
| | Steve | Gloyd | member | Global Health |
| PHI 512 | Jim | Hughes | steering/course co-lead | Biostatistics |
| | Brandon | Guthrie | steering/course co-lead | Epidemiology |
| | Michelle | Garrison | member | Health Services |
| | Joel | Kaufman | member | Environmental and Occupational Health Sciences |
| | Amanda | Phipps | member | Epidemiology |
| | Noah | Simon | member | Biostatistics |
| PHI 513 | Brandon | Guthrie | steering/course co-lead | Epidemiology |
| | Jim | Hughes | steering/course co-lead | Biostatistics |
| | Kristjana | Ásbjörnsdóttir | member | Epidemiology |
| | Todd | Edwards | member | Health Services |
| | Anjuli | Wagner | member | Global Health |
| PHI 514 | J. Scott | Meschke | steering/course co-lead | Environmental and Occupational Health Sciences |
| | Donald | Patrick | steering/course co-lead | Health Services |
| | Anjum | Hajat | member | Epidemiology |
| | Jeremy | Hess | member | Environmental and Occupational Health Sciences |
| | India | Ornelas | member | Health Services |
| | James | Pfeiffer | member | Global Health |
| PHI 515 | Donald | Patrick | steering/course co-lead | Health Services |
| | J. Scott | Meschke | steering/course co-lead | Environmental and Occupational Health Sciences |
| | Marissa | Baker | member | Environmental and Occupational Health Sciences |
| | Peggy | Hannon | member | Health Services |
| | Christine | Khosropour | member | Epidemiology |
| | Nancy | Puttkammer | member | Global Health |
| PHI 516 | Janet | Baseman | steering/course lead | Dean's Office |
| | Tania | Busch Isaksen | member | Environmental and Occupational Health Sciences |
| | Steve | Gloyd | member | Global Health |
| | Kurt | O'Brien | member | Health Services |

¹ Victoria Gardner, Assistant Dean of Equity, Diversity, and Inclusion in the Office of the Dean served as ex officio for each syllabi common core course working group.

Phase 1 MPH Re-Envisioning Steering Committee Members

| | |
|---------------------|---|
| Stephen M. Schwartz | Professor, Epidemiology and Committee Chair |
| Carey Farquhar | Professor, Global Health |
| Brandon Guthrie | Assistant Professor, Epidemiology |
| James Hughes | Professor, Biostatistics |
| Jessica Jones-Smith | Associate Professor, Health Services (Nutritional Sciences) |
| J. Scott Meschke | Professor and Assistant Chair, Environmental and Occupational Health Sciences |
| Donald L. Patrick | Professor, Health Services |
| Rus Hathaway | Curriculum Project Manager |

Executive Summary of Phase 2 Activities

After completion of the Phase 1 Committee work, Phase 2 began in November 2018. The primary goal of this phase was to produce syllabi and course content for the new Master of Public Health (MPH) common core courses that would not only meet the competencies of the Council on Education for Public Health (CEPH), but also prepare incoming MPH students with the knowledge and skills consistent with the UW School of Public Health (SPH) mission to prepare graduates for successful careers in public health practice or public health research. The following six core courses were developed:

| <i>Quarter</i> | <i>Number</i> | <i>Title</i> | <i>Credits</i> | <i>Per Quarter</i> |
|----------------|----------------------|--|--------------------------|--------------------|
| Autumn | PHI ² 511 | Foundations of Public Health | 3 | 10 |
| | PHI 512 | Analytic Skills for Public Health I | 7 | |
| Winter | PHI 513 | Analytic Skills for Public Health II | 3 | 6 |
| | PHI 514 | Determinants of Health | 3 | |
| Spring | PHI 515 | Implementing Public Health Interventions | 4 | 7 |
| | PHI 516 | Public Health Practice | 3 | |
| | | | <i>Total: 23 credits</i> | |

To develop the syllabi, the Phase 2 Steering Committee created work groups for each of the six courses that were led by Steering Committee members and included 25 additional individuals, representing all five departments as well as the Nutritional Sciences program (work group members are listed in the *Participants* section above). Five current MPH students were invited to join the Phase 2 Steering Committee to offer insight from the student perspective and to be a conduit between the work of the Committee and input from students in each department. Throughout course development, the Steering Committee solicited feedback from students, staff, faculty, alumni, and public health partners, as well as departmental and School leadership. Regular communications were sent via email, open houses were conducted, and updates were shared in slide decks; meetings and discussions were also held with these different groups. Feedback received from across the School and the practice community has been invaluable to the completion of these syllabi.

The Committee is pleased to report that all six courses have been approved at the School and University level. The Committee was also able to address important and related topics, including the interprofessional experience and the selection of faculty for teaching the common core courses.

² PHI = Public Health Interdisciplinary

With the production of this report, this Committee completes its charge and is preparing to hand over, and assist as needed, with Phase 3 activities. In the final summary of this document, the Committee provides its input on the next steps to ensure the success of this important work.

Suggestions for the next phase include, but are not limited to:

- ◆ Piloting the new MPH common core courses during the 2019-2020 academic year
- ◆ Methodology developed for measurement and evaluation of core course instruction
- ◆ Faculty training
- ◆ Practice community engagement
- ◆ Student support

Following is a summary of the tasks in the Phase 2 Charge (the full Charge is included in *Appendix 1*) followed by a brief description of the status and relevant parts of this report for each activity.

Per the Phase 2 charge, this Committee was tasked to:

◆ **Develop syllabi for the new common core courses**

This task was completed and all new MPH common core courses have been developed. The syllabi are included in *Appendices 2-7* of this document.

◆ **Ensure consideration was given to:**

- The total number of credits for the new core
- Ensure current course content for BOST 511 (Medical Biometry I) and EPI 512 (Epidemiologic Methods I) is included within PHI 512 (Analytic Skills for Public Health I)
- Cross-cutting themes identified by the Phase 1 committee
- Planning student-centered and evidence-based learning
- Maintain the richness of disciplinary excellence with new interdisciplinary opportunities

Each of the above listed items has been considered and addressed by the Steering Committee and core course working groups throughout syllabi development for the core courses.

◆ **Submit scheduling requests for possible pilot courses in AUT19, WIN20, and SPR20**

Due to timing, it was determined that it would be difficult to pilot one of the new common core courses during autumn quarter 2019. As of this writing, the faculty selection process is underway, and courses need to be further developed prior to piloting. Once faculty are selected, every effort will be made to arrange for courses to be piloted as soon as possible, especially during winter and spring quarters 2020.

◆ **Develop learning objectives per course that map to the CEPH competency-based accreditation criteria**

A mapping of how CEPH competencies will be reflected within the content for each core course is included in the appendices of this document (see *Appendix 12. Council on Education in Public Health Competencies Chart*).

◆ **Craft a memo of explanation to present to the CEPC describing the new core, when requesting approval**

This memo was completed and submitted with the syllabi documents. The memo is included in the appendices of this document (see *Appendix 9. Memo to Curriculum and Education Policy Committee*).

- ◆ **Submit new courses for approval to the UW Curriculum Committee**

The new common courses were submitted on April 1, 2019, and approved during the April 16, 2019 meeting by the UW Curriculum Committee.

- ◆ **Submit Significant Change Proposal to the Graduate School**

This task was determined to be within the charge of the MPH Re-Envisioning Administrative Working Group. The update of this work is included in that report and is a work in progress, as departments continue to finalize the revised curriculum for each degree. It is anticipated that the Change Proposal forms will be submitted in July 2019 (further details on Graduate School submissions is included in the Phase 1 Administrative Working Group report, pages 10-11).

- ◆ **Develop a transition plan for current MPH students**

Current MPH students will not be affected by these changes. The first cohort of students to participate in the new common core will be the incoming class of academic year 2020-21.

- ◆ **Submit UW course catalog degree program changes**

This task was determined to be within the charge of the MPH Re-Envisioning Administrative Working Group. The update of this work is included in that report and is a work in progress while departments continue to finalize the revised curriculum for each degree. Once changes are approved by the UW Graduate School, degree program catalog changes will be implemented (further details on Graduate School submissions is included in the Phase 1 Administrative Working Group report, page 11).

- ◆ **Consider and recommend how to integrate the Applied Practice Experience (APE) within the common core**

Information on APE is provided in the MPH Practicum section of this report (see pages 18-19).

- ◆ **Consider and recommend expectations for the Integrative Learning Experience (ILE) within the MPH curriculum**

Information on ILE is provided in the MPH Integrative Learning Experience section of this report (see pages 20-21).

- ◆ **Determine how to incorporate Interprofessional Education (IPE) within the common core**

The interprofessional CEPH competency is included in the course content for PHI 511: Foundations of Public Health. The PHI 511 work group will work with both the faculty of this course and the Center for Health Sciences Interprofessional Education Research and Practice (CHSIE) during the course development phase to finalize planning and identify other UW schools to work with, as well as appropriate class dates for Autumn quarter 2020. The Committee met with Jeff Sconyers (Senior Lecturer, Health Services, and Chair of the IPE Committee for the UW School of Public Health) to discuss these plans and determined that this was likely to be a viable approach. However, while the didactic portion of IPE will be included in PHI 511, it was recognized that the experiential IPE elements may not be completed in one quarter. The Committee recommends the course developers consider having portions of the IPE requirement run throughout the MPH common core during the first year.

- ◆ **Submit substantive degree changes to CEPH**

This task will be completed once departments and programs finalize their revised MPH curriculum and it is approved by the Graduate School. This work is expected to be completed by the end of August 2019.

Recap of MPH Re-Envisioning Phase 1 Activities

Beginning February, 2018, the initial Steering Committee was brought together to re-envision the Master of Public Health program at the University of Washington's School of Public Health. The purpose of this re-envisioning project was to:

- ◆ ensure our high quality standards are maintained in an increasingly competitive public health education environment.
- ◆ refresh the curriculum with an emphasis on scientific rigor, while improving the practice-based skill set.
- ◆ meet the 2016 competency-based accreditation criteria put forth by the Council on Education for Public Health (CEPH).
- ◆ be more in line with the changes the other top schools of public health have now implemented.
- ◆ have a single and consistent set of common core courses for all incoming MPH students in their first year, and create a true cohort.
- ◆ create a more cohesive, structured, and active learning environment within the common core, providing a student-centered approach to learning.

During Phase 1, this Committee worked together to create and identify content for six new MPH common core courses³. These were proposed as the common core for all incoming MPH students in the Committee's final report:

| <i>Quarter</i> | <i>Number</i> | <i>Title</i> |
|----------------|---------------|---|
| Autumn | PHI 511 | Fundamentals of Public Health |
| | PHI 512 A | Analytic Skills for Public Health I |
| Winter | PHI 512 B | Analytic Skills for Public Health II |
| | PHI 513 | Determinants of Health |
| Spring | PHI 514 | From Evidence to Action and Back: Implementing Public Health Interventions |
| | PHI 515 | Public Health Practice |

The work of this committee culminated in the "[Proposal for a Re-Envisioned UW School of Public Health Master of Public Health \(MPH\) Program, Phase 1 Report to Executive Sponsors](#)," dated October 30, 2018.

³ Changes have been made to this list during Phase 2; see the next section on "Core Courses and Syllabi" for details.

MPH Re-Envisioning Phase 2 Activities

Core Courses and Syllabi

The Phase 2 MPH Re-Envisioning Steering Committee worked closely with faculty in the Syllabi Commons Core Course Working Groups (members listed in the *Participants* section, page 3) to create syllabi for the six new MPH common core courses. These courses are designed to provide all MPH graduates with analytic skills and practical competencies necessary to be productive, effective, and transformational public health leaders, scientists, and practitioners. The common core will also provide skills and knowledge competencies that will meet MPH accreditation requirements from the Council on Education for Public Health (CEPH).

The six MPH common core courses and credits assigned to each course are as follows:

| <i>Quarter</i> | <i>Number*</i> | <i>Title</i> | <i>Credits</i> | <i>Per Quarter</i> |
|----------------|----------------|--|----------------|--------------------|
| Autumn | PHI 511 | Foundations of Public Health | 3 | 10 |
| | PHI 512 | Analytic Skills for Public Health I | 7 | |
| Winter | PHI 513 | Analytic Skills for Public Health II | 3 | 6 |
| | PHI 514 | Determinants of Health | 3 | |
| Spring | PHI 515 | Implementing Public Health Interventions | 4 | 7 |
| | PHI 516 | Public Health Practice | 3 | |

Total: 23 credits

* Note PHI 512 and PHI 513 were previously called PHI 512 A and PHI 512 B because they are two parts of a sequence. The change to PHI 512 and PHI 513 was made to accommodate UW guidelines that A and B cannot be used to designate distinct courses in different quarters.

The Steering Committee anticipates all incoming MPH degree students will be required to take these courses (effective academic year 2020-2021), which amount to a total of 23 credits over three quarters during the first academic year for each cohort. The Steering Committee acknowledges all the concerns raised during its deliberations regarding the number of credits proposed for the common core courses; however, after careful review of the content covered by each course, the Committee found that it was not possible to reduce required in-class and out-of-class instructional hours without compromising the quality of the courses. These discussions took place at multiple meetings and at an all-day retreat on January 22, 2019, which included the Steering Committee, student representatives, and faculty in each of the common core course working groups, as well as members of the practice community. The retreat was extremely valuable in identifying and correcting any overlap or gaps in content across the common core courses and in confirming the number of credits needed for each course.

Input Received and Incorporated

Input has been received from faculty, staff, students, alumni, and the practice community. Since July 2018, more than 70 emails have been received into the mpinput@uw.edu email box, which is monitored by the Re-Envisioning project manager. The majority of these emails have been in response to communications sent in November 2018 and February 2019 that shared the Phase 1 report and provided an overview of the courses, respectively.

Excellent input has also been received since the draft syllabi were sent on March 5, 2019 to CEPC, the SPH Leadership Team, Faculty Council, and the departmental curriculum committees. Several departments also invited members of the Steering Committee to faculty meetings so they could review the course content, answer questions, and listen to additional input. Finally, the Steering Committee conducted four in-person “Open House Sessions” (two in November 2018 and two in February 2019) and were pleased to see more than 100 faculty, staff, and students attend and provide feedback on the content of these new MPH common core courses.

The Steering Committee has also been reaching out to the practice community. Members of the community were invited to the previously noted all-day retreat in January 2019. Additionally, the Steering Committee held a webinar in late February for approximately 25 members of the practice community. Then in March the syllabi were sent to an advisory group of practice community members for their input. Engagement with these key stakeholders continues through Janet Baseman, Associate Dean of Public Health Practice. Plans for future communications and interactions are included in the Practice Community Engagement section of this report (see page 26).

Some feedback received from faculty, staff, and students is that the syllabi do not include details on which specific domains and topics will be covered, such that some domains are not explicitly indicated within the documents. The Committee has made every effort to incorporate perspectives from all departments and programs and is committed to including the broad range of substantive domains as course materials are developed. The Committee envisions that case studies, readings, and assignments will present both examples and perspectives from these different topic areas (e.g., genetics, nutrition, One Health) and will provide guidance to course developers to ensure this takes place.

The common core course leads for each syllabus are members of the Steering Committee and have been reading and discussing general input, as well as input relevant to their specific course, throughout the syllabi preparation period. In addition to incorporating input into the syllabi, the leads have been identifying input that will be shared with course developers once they are selected.

Remarks on Course Development

The Steering Committee has been having discussions with faculty in the Department of Epidemiology regarding how students will transition from PHI 512 to EPI 513 (Epidemiologic Methods II). There are questions about whether students going on to EPI 513 will have the knowledge and skills necessary for the course.

A meeting to begin these discussions took place on March 19, 2019, and included Carey Farquhar (Chair of the Steering Committee), Brandon Guthrie (Epidemiology and Steering Committee member), Jim Hughes (Biostatistics and Steering Committee member), Ali Rowhani (Epidemiology), Erin Morgan (Epidemiology and Steering Committee Student Representative), Amanda Phipps (Epidemiology and PHI 512 working group member), and Noel Weiss (Epidemiology). The goal is and has always been to create a curriculum that allows students to transition smoothly from PHI 512 to EPI 513 if they desire additional epidemiology training. There was consensus that this would be possible, although challenging, and that it would require ongoing dialogue between the instructors of EPI 512, EPI 513, and PHI 512.

The transition from PHI 512 to BIOST 512 (Medical Biometry II) has also been a topic of discussion and appears feasible based on conversations within Steering Committee and CEPC meetings, as well as with individual Biostatistics faculty outside these meetings. It will require that PHI 512 provides content equivalent to BIOST 511 (Medical Biometry I), which is incorporated into the syllabus and will be communicated to the PHI instructors. The Committee will work with course developers on a mechanism that would allow students to go on to BIOST 518 (Applied Biostatistics II).

Additional Information for Course Developers

In addition to the syllabi, members of the Committee are compiling documents (rich materials that go beyond what is included in this report) to help guide course developers to further enhance course materials and refine the teaching approach. These documents include:

- ◆ Syllabi for the MPH common core courses (also in *Appendices 2-7*)
- ◆ Course working group meeting notes and additional notes on course content
- ◆ Meeting notes from the all-day committee/work groups retreat
- ◆ Input tracking spreadsheet (i.e., a list of all input received re: course content)
- ◆ List of possible case studies and shared datasets (ensuring topics cover all department and program topics in a variety of ways)
- ◆ Recommendations for the in-class large learning communities
- ◆ Cross-Cutting themes chart (*Appendix 11*)
- ◆ CEPH competency chart (*Appendix 12*)

Once faculty are assigned for each course, the Committee recommends that each common core course working group meet with the course instructors to review the syllabus, the materials noted above, and discuss in more detail teaching methods and materials. It is envisioned that all common core course instructors will come together and meet regularly as they develop and teach courses to avoid overlap and gaps in the curriculum, as discussed in the Final Summary.

Finally, as noted in the “Final Summary and Next Steps” portion of this report, it is the Committee’s recommendation that all the MPH common core faculty receive team teaching, active-learning, and student-based-learning training from the UW Center for Teaching and Learning or a similar organization (as noted on pages 28-29). Part of the work of this Committee has been to redefine how course content can be taught within the MPH program. The Steering Committee wants to ensure faculty move forward with this new model and will be agile and nimble with new teaching techniques to continually meet the needs of students.

Council on Education for Public Health (CEPH)

One of the goals of the new MPH common core is to encompass the revised [2016 CEPH requirements](#) within this set of courses. The Committee has determined assessments for each of the D-2, CEPH Foundational Competencies, as well as which common core courses will cover these assessments. Some courses also build on content and the Committee has ensured the competency assessment takes place in the appropriate content-related course. A more detailed chart that outlines competency areas and level of course review is included in *Appendix 12*.

Cross-Cutting Themes

In addition to establishing the overall set of MPH common core courses, the Phase 1 Committee established a set of cross-cutting themes that could run through the entire common core curriculum. These themes were:

- ◆ Ethics and Equity
- ◆ Global and Local
- ◆ Communication
- ◆ Systems Thinking
- ◆ Leadership and Collaboration
- ◆ Evidence to Action and Back (Cycles and Synergies)

The Phase 2 Steering Committee simplified this list to four broad areas that represent important values for the re-envisioned MPH and can be deliberately woven into the curriculum and called out during the launch of the new common core courses. Some aspects of these four cross-cutting themes will be emphasized in each of the six MPH common core courses and there will be specific activities related to each theme. Some examples of topics that will be covered are included below:

- ◆ **Ethics and Equity**
 - Cultural humility and acknowledgement of cultural values
 - Institutional racism, poverty, socioeconomic status, income inequality, neighborhood segregation
 - Ethical conduct of research and public health practice
 - Role of community engagement in designing solutions for population health issues
 - How to create, and advocate for, equitable health care systems
- ◆ **Evidence to Action**
 - Evidence generation—risk factors for ill health
 - Causal perspective
 - Public health as a mechanism to address risk and promote health
 - Design evidence-based interventions
 - Implement and evaluate changes to systems and policies
- ◆ **Leadership, Communication, and Collaboration**
 - Interdisciplinary group work: group values and ethics
 - Collaborative effort through team projects: establishing group norms, roles, and responsibilities
 - Leadership organization and delegation
 - Building partnerships
 - Advocacy for Public Health
 - Multi-stakeholder communications
- ◆ **Systems Thinking: Globally and Locally**
 - Achieving impact at scale
 - Understanding the complete system to achieve successful implementation
 - Prevention and healthcare in resource-constrained settings
 - Sustainability from the lens of implementation science

A chart providing examples of how and where each area is incorporated into each course, as well as how students will apply the learning, is included in *Appendix 11*.

MPH Applied Practice Experience

In February 2019, a committee of MPH Practicum Faculty leads within the UW School of Public Health (SPH) was re-assembled to discuss and plan for the future state of the MPH practicum (also referred to as Applied Practice Experience) under the re-envisioned MPH. The Committee includes invited representatives from SPH departments and interdisciplinary programs that have MPH programs, the Associate Dean for Public Health Practice, and the SPH Manager of Experiential Learning. Many of the Committee members worked together to develop the Report and Recommendations of the MPH Practicum Review Group of October 2016.

Following are recommendations currently being discussed within this Committee regarding changes to the future of the MPH Practicum under a re-envisioned MPH:

- ◆ Ensure communication and dissemination across the SPH of the definition of a legitimate practicum experience for MPH students to ensure that faculty, staff, and students understand the purpose and value of the practicum experience and how it differs from other program requirements.
- ◆ Increase number of required practicum hours from 120 to 160. (The 2016 MPH Practicum Review committee recommended an increase in minimum number of hours devoted to the MPH practicum experience to 160 in their 2016 report, which was accepted by CEPC but not implemented by SPH). **See the following table: Number of required hours MPH practicum at other top ranked Schools of Public Health.*
- ◆ Create guidance for course-based practicum experiences, including: a) in/out of class required hours; b) strategies for aligning course objectives with MPH practicum requirements; and c) a review process for proposals for course-based practicum experiences that includes review by the committee of MPH Practicum Faculty Leads prior to CEPC review and approval.
- ◆ Propose a range of acceptable final practicum project deliverables that accommodates both SPH and public health agency site needs.

The Committee of MPH Practicum Faculty leads should continue its work to ensure alignment of the MPH Practicum experience with new CEPH Applied Practice Experience criteria and any needed additional modifications to the practicum as additional future curricular changes unfold (e.g., MPH capstone/thesis options, Interprofessional Education requirements, etc.).

Number of required hours for MPH practicum at other top ranked Schools of Public Health

| Rank⁴ | School | Number of hours required for completion |
|-------------------------|---|--|
| 1 | Johns Hopkins University | ≥ 100 |
| 2 | Harvard University | MPH-65 Practicum: ≥ 200 (during summer) |
| 2 | University of North Carolina, Chapel Hill | Varies by department (e.g. ≥ 240 for Health Behavior students) |
| 3 | University of Michigan, Ann Arbor | ≥ 318 |
| 4 | Columbia University | Varies by department, ranges from no hourly requirement to 6-month international practicum |
| 5 | University of Washington | ≥ 120 |
| 6 | Emory University | 200-400 |
| 7 | University of Minnesota, Twin Cities | 90-180 |
| 8 | University of California, Berkeley | 480 (12 weeks, full-time) |
| 9 | Boston University | ≥ 240 |
| 10 | University of California, Los Angeles | 400 (≥ 10 weeks) |

⁴ Order taken from the US News and World Report 2015 Rankings.

MPH Integrative Learning Experience

Per the Phase 2 Charge, the Steering Committee was tasked to consider and recommend expectations for the Integrative Learning Experience (ILE) within the MPH Curriculum. Although the Committee had discussions around this topic, more work will be needed by the departments and interdisciplinary programs, as well as the next working committee for MPH Re-Envisioning.

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

ILE requirements for MPH students per [CEPH](#) are as follows:

- ◆ Students must complete an ILE that demonstrates synthesis of foundational and concentration competencies.
- ◆ The ILE represents a culminating experience and may take many forms, such as a practice-based project, essay-based comprehensive exam, capstone course, integrative seminar, etc.
- ◆ Regardless of form, the student produces a high-quality written product that is appropriate for the student’s educational and professional objectives. Written products might include the following: program evaluation report, training manual, policy statement, take-home comprehensive essay exam, legislative testimony with accompanying supporting research, etc.
- ◆ Ideally, the written product is developed and delivered in a manner that is useful to external stakeholders, such as nonprofit or governmental organizations.
- ◆ The experience may be group-based or individual. In group-based experiences, the school or program documents that the experience provides opportunities for individualized assessment of outcomes. The school or program identifies assessment methods that ensure that at least one faculty member reviews each student’s performance in the ILE and ensures that the experience addresses the selected foundational and concentration-specific competencies. Faculty assessment may be supplemented with assessments from other qualified individuals (e.g., preceptors).

Thus, CEPH acknowledges that different types of culminating projects would satisfy ILE requirements. The Steering Committee acknowledges that different students may prefer one over the other based on their interests in public health research versus practice. With this in mind, the Committee believes that both the thesis and capstone have value as an ILE. The Committee suggests this topic continue to be discussed (further details on this topic are included in the Phase 1 Administrative Working Group report, pages 21-22).

As shown in the table below, the majority of the current MPH degrees provide a thesis option only; however, it may be worth departments/programs adding in a capstone as an option (providing more flexibility for students) or replacing the thesis with a capstone (providing cost-savings)—especially if the degree is more based in practice rather than in research.

| Current Tuition-Based MPH Degrees | Thesis | Capstone |
|---|---------------|-----------------|
| Biostatistics | ✓ | |
| Environmental and Occupational Health | ✓ | |
| Occupational and Environmental Medicine | ✓ | |
| One Health | ✓ | |
| Epidemiology | ✓ | |
| Epidemiology: Global Health | ✓ | |
| Epidemiology: Maternal and Child Health | ✓ | |
| Global Health | ✓ | |
| Global Health: Leadership, Policy, and Management | ✓ | |
| Global Health: Metrics and Evaluation | ✓ | |
| Health Services | ✓ | |
| Health Services: Health Systems and Policy | ✓ | ✓ |
| Health Services: Maternal and Child Health | ✓ | |
| Health Services: Social and Behavioral Sciences | ✓ | |
| Nutritional Sciences | ✓ | ✓ |
| Public Health Genetics | ✓ | |

Final Summary and Next Steps

The following section includes recommendations from the MPH Re-Envisioning Steering Committee to the Executive Sponsors for consideration. These areas include:

- ◆ Establishing a Phase 3 Steering Committee, including a draft charge
- ◆ Planning for the measurement and evaluation of the re-envisioned MPH degree
- ◆ Engaging with the practice community
- ◆ Supporting the new MPH common core courses:
 - Piloting courses during the 2019-20 academic year
 - Faculty selection
 - Faculty training
 - Student resources: boot camps and tutoring

ESTABLISHMENT OF PHASE 3 STEERING COMMITTEE OR MPH CORE STEERING COMMITTEE

To help ensure this re-envisioning is successful and reaches its greatest potential, the Committee recommends additional work be convened as soon as possible for Phase 3 and beyond. Below are suggestions which could be included in a Phase 3 draft charge.

Suggestions for Charge to MPH Re-Envisioning Phase 3 Steering Committee or MPH Core Steering Committee

The primary charge for Phase 3 of re-envisioning the School of Public Health Master of Public Health (MPH) degree would be multi-faceted. This phase would primarily be responsible for ensuring a successful go-live of the new MPH common core effective Autumn quarter 2020, and that departments and programs revised curriculum are set up for success in managing the new MPH common core. The next phase of work should also ensure that all administrative aspects are prepared and in place for the revised program launch.

Once assured of a successful new MPH common core launch, Phase 3 can go beyond this mandate to continue where the MPH Re-Envisioning Administrative Working Group completed its work in determining if:

- ◆ Changes will be made to current MPH degrees (e.g., will it remain with 18 separate degrees?).
- ◆ A single admissions process at the initial phase will be administered, and, if so, create policies and procedures for its management.
- ◆ Other administrative areas will be centralized to provide enhanced student services in advising, recruitment, career development, and alumni relations, and create policies and procedures for its management.
- ◆ Changes are needed, as well as how to implement them, to the Applied Practice Experience (APE) or to the Integrative Learning Experience (ILE).

In order to complete this work, the Committee recommends establishing a Steering Committee and recommends hiring an MPH Core Director who would have the following responsibilities:

Tasks included in work for an MPH Core Director position⁵:

- ◆ In collaboration with departmental chairs, manage the approved process of faculty selection of the common core PHI courses (see pages 27-28 for process).
- ◆ Work with departments and programs to coordinate admissions numbers (ensuring overall incoming numbers do not exceed what can be accommodated). The Administrative Working Group recommends this task begin as soon as possible to advise departments and programs on expected numbers to admit in the 2020-21 academic year. This task includes crafting a process similar to the common core faculty selection process and having it approved by the dean and department chairs.
- ◆ Coordinate any piloting of common core courses during the 2019-20 academic year (further details on piloting courses for the MPH common core is included on page 27).
- ◆ Convene and collaborate with the MPH Core Steering Committee and the MPH Common Core Instructional Working Group to complete common core course development and ensure a successful go-live prep and launch of the new MPH common core curriculum effective Autumn 2020 (committees reviewed in table below).
- ◆ In coordination with the Senior Associate Dean, manage training workshops for the common core faculty, in collaboration with the UW Center for Teaching and Learning (further details on faculty training for the MPH common core courses is included on pages 28-29).
- ◆ Coordinate scheduling and other administrative aspects of common core courses with appropriate staff.
- ◆ In collaboration with the Associate Dean for Public Health Practice, engage with the practice community re: the common core curriculum (further details on practice community engagement for the MPH common core is included on page 26).
- ◆ Monitor the measurement and evaluation (M&E) plan (further details on M&E for the MPH common core is included on pages 25-26).
- ◆ Pursue the development of a general MPH degree, relevant admissions processes, as well as the possibility of students switching degrees in spring quarter of their first year (further details on this topic are included in the Phase 1 Administrative Working Group report, pages 8-10).

⁵ This MPH Core Director, staff, and committees section came from the Phase 1 Administrative Working Group report, pages 14-16.

The Director will be supported by a full-time staff position. The individual in this role would require a wide-ranging skill set for both program coordination and project management functions. Duties could include:

- ◆ Schedule the common core courses each quarter, working in coordination with other MPH schedulers.
- ◆ Support the Director and Committees noted above and below.
- ◆ Manage the hiring of teaching assistants for the common core courses.
- ◆ Additional common core course support that includes, but is not limited to, Canvas, web site updates, and processing course evaluations.
- ◆ Project management and coordination through all UW systems for a new general MPH degree and other possible MPH structural changes that may be forthcoming.

Additionally, the Steering Committee and Administrative Working Group recommend creating two new committees: a steering committee to oversee the vision of moving the UW Master of Public Health degree into the future; and a working group of the core course instructors to create faculty cohesion to both finalize course development and act as the curriculum committee for these courses, when needed.

Further details for each committee include:

MPH Core Steering Committee

- ◆ Work with and advise the MPH Core Director to ensure successful go-live effective Autumn quarter 2020 of the new MPH common core curriculum.
- ◆ In collaboration with other applicable committees, manage changes as needed to the Applied Practice Experience (APE) and the Integrative Learning Experience (ILE).
- ◆ Work with departments and programs on any MPH degree changes and ensure perspectives from across the School are considered in meeting student educational needs.
- ◆ Explore areas of possible collaboration among departments and programs (and other schools) in the delivery of curricular and/or service needs.
- ◆ Oversee management for the rollout of the new General MPH degree, anticipated to launch Academic Year 2021-22.

MPH Common Core Instructional Working Group

- ◆ Under the direction of the MPH Core Director, act as the curriculum committee for PHI courses, provide overall direction and strategic planning for common core/PHI curriculum, and coordinate course content and pedagogy.

| | |
|---|--|
| <p><i>Committee members will include:</i></p> <ul style="list-style-type: none"> ◆ The MPH Core Director. ◆ Departmental and Program MPH Directors. ◆ Associate Dean for Public Health Practice. ◆ Other faculty as needed and appropriate to ensure diverse viewpoints are considered. ◆ Staff sufficient to help advise on and administer administrative aspects of the new MPH common core. | <p><i>Committee members will include:</i></p> <ul style="list-style-type: none"> ◆ The MPH Core Director, who serves as committee chair. ◆ Faculty members teaching the common core PHI courses. ◆ Staff sufficient to help advise on and administer administrative aspects of the new MPH common core. |
|---|--|

MEASUREMENT AND EVALUATION

The importance of measuring, evaluating, monitoring, and implementing any needed changes cannot be overstated. The Steering Committee recommends creating a robust plan for evaluation of not only the courses but also for the re-envisioned MPH degree overall to ensure the School is meeting the needs of MPH students in a thoughtful and academically-challenging way. It is critical to be nimble and agile with new/revised MPH curriculum, especially in the first two to three years of program management to ensure the program meets its goals and objectives. A measurement and evaluation plan will also provide useful data for reporting progress and updates to the Council on Education for Public Health (CEPH).

If a MPH Core Director and Core Steering Committee are put in place, part of their responsibilities could be to monitor course and program evaluations, and work with faculty, staff, and students to find areas of improvement and ways in which they can be implemented.

Please note the below draft Assessment Plan chart as one option for consideration.

[DRAFT] MPH Re-Envisioning Assessment Plan

Common Core Measurement and Evaluation

| Item | Timing | Purpose | Audience | Method |
|--------------------------------------|----------------------|--|------------------------------------|--|
| Written feedback form (anonymous) | Mid-way, per quarter | Brief questions regarding student learning | Students | Can be distributed hard copy or online (e.g., Google forms) |
| Regular UW course evaluation | End of each quarter | Quantitative and qualitative student input | Students | Distributed by the UW Office of Educational Assessment |
| High-level course assessment reports | End of each quarter | Course check-ins | MPH core director and core faculty | IASystem Course Summary Reports |
| | Quarterly | Teaching evaluations | MPH core director and core faculty | Coordinated by MPH Core Director to assist course effectiveness and teaching improvement |

Overall Degree Measurement and Evaluation

| Item | Timing | Purpose | Audience | Method |
|-------------------------|-----------------------------|--|--|---------------------------------------|
| Entering student survey | At MPH Orientation | Assess expectations | Incoming cohort | Distributed by Google forms via email |
| End of year one survey | End of spring quarter | Assess quantitative and qualitative mid-way point delivery | Year one cohort | Distributed by Google forms via email |
| | Summer post year one | Review findings for possible program updates/improvements | MPH core director and steering committee | Review of anonymous survey results |
| Graduate survey | Once applied to graduate | Assess overall degree: were goals and expectations met | Students graduating (effective SPR22) | Distributed by Google forms via email |
| End of year two survey | Summer post-graduation year | Review findings for possible program updates/improvements | MPH core director and steering committee | Review of anonymous survey results |
| Alumni survey | One year post graduation | Lookback on degree, suggestions for improvements | Alumni (effective SPR23) | Review of anonymous survey results |
| | | Review findings for possible program updates/improvements | MPH core director and steering committee | Review of anonymous survey results |
| Employer survey | One year post graduation | Review findings for possible program updates/improvements | MPH core director and steering committee | Review of anonymous survey results |

PRACTICE COMMUNITY ENGAGEMENT

Feedback from the public health practice community has been valuable throughout the re-envisioning process to date. The Steering Committee recommends the formation of a Public Health Practice Advisory Group for the MPH program moving forward, to be convened, as appropriate, by the Associate Dean for Public Health Practice and the MPH Core Director.

The Advisory Group would advise the MPH Steering Committee on the following matters:

- ◆ Recommendation of case study topics and/or assistance with development of case studies for the MPH common core curriculum based on real community health or public health organizational scenarios to ensure that the MPH core curriculum presents students with public health practice-relevant examples.
- ◆ Strategies for accessing data sets from public health practice agencies for students to use on projects within MPH common core courses.
- ◆ Suggestions for additional/evolving MPH common core learning objectives based on workforce needs not currently being met by the MPH common core curriculum (as well as more broadly within MPH curriculum).

SUPPORT FOR THE MPH COMMON CORE

Piloting courses during the 2019-20 academic year

All of the core courses are novel in some aspect: they are based on new integrated syllabi, or are proposed to be taught in new ways, or both. The Steering Committee anticipates that faculty selected and agreeing to co-teach one of these MPH common core courses starting Autumn 2020 will want to take advantage of the possibility of piloting their course. The pilot could be offered as an elective course in Winter or Spring 2020 (or earlier if feasible).

The exact format of the pilot, the outreach method to attract students to sign up for the course, and the choice of which students would be eligible to take the pilot course as an elective, will be decided by each team of co-instructors.

Faculty selection

Selection of faculty for developing and teaching the new MPH common core courses is a critical component in the success of the new re-envisioned MPH. Faculty have been energetically engaged in the work groups that developed the common core course syllabi for approval, and the Steering Committee anticipates continued engagement and enthusiasm for developing and co-teaching the common core courses. Negotiation of faculty responsibilities, especially teaching, is the responsibility of the department chair of the appointing department.

The Steering Committee has therefore developed, received feedback from key stakeholders, and revised the plan for the selection of the co-instructors for the common core courses. The result is as follows:

The MPH Steering Committee strongly recommends ensuring representation from all UW School of Public Health departments in the faculty selected to co-teach the collective set of common core courses (PHI 511 to 516). The diversity of academic as well as racial, ethnic, and gender perspectives is critical to the cross-cutting themes and we want our instructors to reflect this same diversity.

- ◆ Nomination of potential MPH common core course co-instructors for PHI 511, 512, 513, 514, 515, and 516 should be an open process. Nominations will be sought from:
 - Department Chairs
 - Members of the MPH Steering Committee
 - Current SPH students and staff
 - Self-nominations will be sought from faculty

- ◆ The nomination or self-nomination should describe the qualifications of the nominee to co-teach in the particular common core course(s) with respect to both content and student centered learning skills. Nominations should be sent to the staff coordinator of the MPH Steering Committee (Kimberly Hay, kfs3903@uw.edu), who will send them to the Department Chairs as well as the members of the MPH Steering Committee.

- ◆ Each Department Chair and the MPH Program Director or Interim Director, with support from the MPH Steering Committee, will create short lists of co-instructors. Focus will be on nominees' qualifications relevant to specific core course content and their ability to deliver integrated student centered learning. Specific courses draw from disciplinary domains that align with departments and those courses should have instructors set by the respective department chairs. For example, the chairs of Biostatistics and Epidemiology would have primary responsibility for PHI 512 (Analytic Skills for Public Health I).
- ◆ The Department Chairs and the MPH Core Director (representing the MPH Steering Committee) will review the short lists and make final recommendations to the Dean that include dissenting voices if no consensus is reached. Chairs must approve all recommended appointments.
- ◆ The Dean will make the final determination as to who should be invited to teach these MPH common core (PHI) courses.

Faculty training

The Steering Committee has given much thought into how these new courses may be taught in the best interest of student learning. With the new concept of a single cohort of the entire MPH program, that will be team-taught, it is critical to get this right. As faculty, the Steering Committee would like to assist and prepare our colleagues who will be teaching in the common core with these new teaching techniques. The emphasis on these areas will not only help the School effectively roll-out the re-envisioned MPH, but also assist all faculty in providing students with an excellent learning environment.

The tenants of this training are recommended to be:

- ◆ Team-based
- ◆ Active-learning
- ◆ Student-centered
- ◆ An integrated approach to teaching

For the most part, the School currently teaches with a lecture-based, single instructor approach. The Steering Committee recommends this new common core be different. This new cohort of students will be interdisciplinary, and the teams of faculty will be interdisciplinary too; providing an exciting opportunity for both faculty and students to learn from one another.

These teaching techniques allow for an environment that is interactive and problem-solving in the classroom (vs. a standard lecture-style). The Steering Committee has had discussions with the UW Center for Teaching and Learning (CTL) on how these trainings could be provided to the new common core faculty. This approach could be modified as well for School-wide trainings for all faculty.

In addition to the above noted tenants, the Steering Committee believes it is important that the MPH common core helps students feel they are part of a School of Public Health cohort, in addition to being part of a department or program. The Steering Committee anticipates the common core faculty will work together to ensure this happens. One of the ways the Steering Committee suggests is noted in the documents provided to the course developers on creating large learning communities. These working groups of students will be made up of students from various departments and programs so they can each learn from one another and work together, just as they will do in their careers moving forward.

The Committee recommends working with CTL on a three-part training approach, where CTL will:

- ◆ Provide workshops for the common core set of faculty on [active-learning](#) teaching styles and techniques, including how it is introduced and used in a classroom-setting. These workshops could begin as early as autumn quarter, 2019.
- ◆ Work with the common core set of faculty to create an [evidence-based teaching](#) (EBT) group. This type of group is faculty-driven, working together and meeting regularly to discuss teaching and create goals. CTL provides resources necessary for success. As courses are being taught, peers in that group attend classes and provide peer input. The Steering Committee recommends, however, the group begin working together much sooner than that, perhaps as early as this summer (2019).
- ◆ Provide workshops on using an alignment model—where curriculum development and pedagogy are brought together, ensuring the course content is aligned with how to teach as well as how to engage students and assess their learning.

As some course development is expected to begin during summer 2019, CTL is prepared to offer one to two workshops through mid-August (and again once Autumn quarter is underway) for the common core faculty to initiate the process. Workshops could be one or two hours each, depending on the purpose and goals that are defined in advance between the MPH Core Director, the common core faculty, and CTL. The Steering Committee believes this would be helpful to faculty as they consider new approaches to teaching and begin to work together.

If the School would then like to implement trainings on a larger scale, CTL has suggested considering faculty retreats that include training sessions on any of the above noted topics (active learning, evidence-based, alignment model). It could also be possible that common core faculty, once trained in EBT, could then facilitate other groups of School faculty. Further, CTL could work with the School on a phased-approach that would be in-line with other School and faculty priorities.

Student resources: boot camps and tutoring

Supporting students' academic performance in the MPH common core courses is crucial to the success of the new core curriculum. In bringing together a diverse group of students with different academic preparations for the new MPH common core, it will be important to provide the necessary support for student learning.

The Steering Committee recommends that each year the UW School of Public Health (SPH) Office of the Dean sponsor a three-day (4 hours/day) optional "boot camp" for incoming MPH students immediately prior to the start of the autumn quarter. The boot camp would be run by two senior graduate students (likely from Biostatistics and/or Epidemiology) and will focus on a review of basic mathematical tools needed for success in the introductory biostatistics and epidemiology courses, as well as an introduction to the R statistical programming language. Incoming students may choose to participate in part or all of the boot camps. See *Appendix 10* for a boot camp outline.

In addition to Boot Camp, students in the MPH common core courses may need a go-to person to request help for subject matter tutoring, as well as time management advice and study skills. MPH common core instructors may find themselves in the role of providing learning support and accommodations for students in the common core. For this reason, the Steering Committee suggests SPH consider adding a learning specialist position to support all student learning—from organizing and implementing the tutoring program, providing workshops on academic success, learning styles, thesis writing, test-taking, study skills, and working with adults with learning disabilities. This position can be part-time or shared with another health profession school, and would work with department chairs, the MPH Core Director, common core instructors, as well as departmental teaching faculty across the School to facilitate successful learning outcomes and academic success.

Appendices

Appendix 1. Charge to MPH Re-Envisioning Steering Committee, Phase 2

The primary charge for the re-envisioning steering committee Phase 2 is to develop the materials for the proposed core courses for the reimagined School MPH degree that were recommended by the Phase 1 committee. The materials are those that are needed to gain approval from both the CEPH and the UW curriculum committee. This reimagined MPH Common Core is to prepare practitioners who appreciate the value and utility of evidence-based approaches to public health and researchers who value public health practice approaches to advance the health of populations. This core should provide our students with breadth and depth in public health: both a richness of disciplinary excellence and interdisciplinary opportunity, using examples from local, national and global public health.

In Phase 1, the MPH re-envisioning committee was charged to: i) Identify the core competencies / knowledge / & skills for all MPHs; ii) Create the components of the common core in an integrated program; iii) Look ahead to future needs of SPH students and degrees; iv) Identify the needs of students emphasizing practice-based MPH training; v) Identify the needs of students emphasizing research-based MPH training; vi) Provide a nimble framework for implementing the full re-envisioned MPH degree at UW. The results of Phase 1 are described in a *Phase 1 Final Report*, to be available online.

In Phase 2, the committee should build on the work done by the original committee, and is specifically charged to:

1. Form overlapping subgroups of members and invited additional faculty, student(s) and other key stakeholders (see additional detail below) to develop syllabi for
 - a. PHI 511 Fundamentals of Public Health
 - b. PHI 512 A and B Analytic Skills for Public Health
 - c. PHI 513 Determinants of Health
 - d. PHI 514 Evidence to Action Cycle: Implementing Public Health Interventions
 - e. PHI 515 Public Health Practice
2. As the syllabi are developed, careful consideration should be given to
 - a. The cross-cutting themes identified by the Phase 1 committee and how they will be addressed in the different core courses
 - b. Planning for student centered learning and use of evidence based techniques (faculty with experience in these methods will be especially welcome in the subgroups)
 - c. Reducing the number of credits where possible, with a tentative target of 20 credits in the five core course sequence
 - d. Maintaining richness of disciplinary excellence combined with new interdisciplinary opportunity
 - e. Ensuring the level of material covered in PHI 512 A is equivalent to the level in the current EPI 512 and BIOS 511 courses, with the proviso that
 - Additional supports, both prior to and during the first Fall quarter, for some entering MPH students should be addressed and described
3. Develop the learning outcomes for each course and map them to the designated CEPH competencies in the course syllabus

4. Consider and recommend how to incorporate Inter-professional Education (IPE) required MPH program elements
5. In consultation with the Practicum Oversight Committee (or equivalent cross program practicum group), consider and recommend how to integrate the Applied Practice Experience (APE) as part of the required MPH program elements
6. Consider and recommend a set of common expectations for the Integrated Learning Experience (ILE) specific to UW School of Public Health.
7. Develop a short memo that explains how the core courses relate to each other and to the goals of the re-envisioned MPH, that can be distributed to the faculty at large, the CEPC and the UW curriculum committee along with the syllabi for review and approval.
8. Prepare a final report that summarizes the Phase 2 work (including approved syllabi and curriculum) that can be posted online in summer 2019 for students applying to matriculate into UW MPH programs in Fall 2020.

We greatly appreciate the effort that the committee will put into preparing these syllabi. The Office of the Dean will provide limited financial support for the development of each PHI syllabus (to be divided amongst the subgroup members for that course). Additional financial support in the form of FTE will be provided at a later date to the course co-instructors who develop the class materials (lesson plans) for each course from these syllabi. The work of the committee will be supported both by the project appointed MPH curriculum program manager (through January 2019) and by a curriculum and academic services project coordinator, both of whom will be paid for by the Office of the Dean.

It is envisaged that the committee will develop a timeline and conduct its work so that

- Infrastructure elements including classroom reservations can be filed prior to January 25th 2019 (for any Fall 2019 course pilot electives); prior to July 19th 2019 (for Winter 2020); prior to Nov 1st 2019 (for Spring 2020).
- Faculty can review and approve the proposed syllabi at both department and School level by March 21st, 2019.
- Courses can be formally proposed to the CEPC no later than March 14, 2019, and
- Courses can be submitted to the UW Curriculum committee before April 1, 2019).
- A Significant Change Proposal can be filed to the Graduate School by April 4th, 2019 (note OAAP does not meet during the summer) <https://grad.uw.edu/wordpress/wp-content/uploads/Significant-Change-Form.pdf>
- Responses to requests for clarification and additional actions from the Office of Academic Affairs and Planning (OAAP) in the Graduate School can be addressed by May 2nd, 2019 <http://grad.uw.edu/for-faculty-and-staff/creatingmodifying-programs/guidelines-for-changes-to-graduate-program/>
- A transition plan for students currently in the MPH program can be developed by May 2nd, 2019
- Changes to the degree program in the UW course catalog can be made by May 2nd, 2019
- Substantive change in degree submission to CEPH can be filed on a rolling basis, but the goal date would be June 10th, 2019.

A Final report describing details of and approved syllabi for the new program is due to the executive sponsors by June 10th 2019.

The Round 2 Committee Members are:

Carey Farquhar, Chair of MPH Re-envision committee, Global Health, cfarq@uw.edu

James P. Hughes, Biostatistics, jphughes@uw.edu

J. Scott Meschke, Environmental and Occupational Health Sciences, jmeschke@uw.edu

Brandon L. Guthrie, Epidemiology, brguth@uw.edu

Donald L. Patrick, Health Services, donald@uw.edu

Shirley A.A. Beresford, Senior Associate Dean (*ex officio*)

Janet G. Baseman, Acting Associate Dean for Public Health Practice (*ex officio*)

The committee also should feel free to call upon the following individuals for assistance in an ex officio capacity:

Jeff Hodson, Communications Director

Victoria Gardner, Chief Diversity Officer

Appendix 2. Syllabus—PHI 511, Foundations of Public Health

Autumn 2020, 3 credits

Instructor: TBD **Time:** (2x/week @ 1.5 hours)
Phone: TBD
Email: TBD **Location:** TBD
Office: TBD
Office Hours: TBD **Canvas URL:** TBD

Teaching Assistants: TBD
Phone: TBD
Email: TBD
Office: TBD
Office Hours: TBD

Course Description

This interdisciplinary core course examines public health and healthcare in the US and globally using a social justice lens and emphasizing the interconnectedness of population and individual health. Using public health and healthcare delivery as the overarching framework, the course will cover foundational elements of public health, including, but not limited to, its history and impact, the importance of health equity and human rights, and how racism manifests and is perpetuated within public health and healthcare systems. The course will build a sense of community and instill a public health mindset among each entering MPH cohort by having all students learning together, and it will lay the foundation for students to work effectively as public health professionals on inter-professional teams.

Course Learning Objectives

After successfully completing the course, students will be able to do the following, **within global and national settings:**

1. Compare and critique public health and healthcare organizations, systems, and approaches.
2. Evaluate the evolution and impact of public health programs and healthcare delivery on population health outcomes.
3. Define the three core functions of public health and explain how each contributes to primary, secondary, and tertiary prevention of diseases in different settings.
4. Integrate historical and social justice lenses to describe major causes and trends of population health.
5. Apply concepts of diversity, equity and inclusion to function as an effective member of an inter-professional team.

Readings

Each class session will have a tailored set of readings compiled from a variety of sources.

Readings will be available to you via the Canvas website (see instructions above). You are expected to have read all of the required readings prior to the class period for which they are assigned, and be able to engage in discussions around relevant topics that apply to those readings and the lecture for that day.

Learning Assessments & Grading

Final grades will be calculated as follows:

| Assessment Item | Grade Percentage |
|---|-------------------------|
| Contribution to small group discussions with peer- and self-assessments (credit/no credit) | 15% |
| Responses to individual assignments uploaded by students once per week (credit/no credit) | 10% |
| Responses to group assignments uploaded to Canvas once per week by group leads, who will rotate each week (credit/no credit) | 10% |
| Two quizzes with short answer responses that occur mid-quarter (numeric grade) | 25% |
| Final paper on one of three topics due at end of the quarter (numeric grade) | 40% |

Course Outline

MODULE 1: Core Functions of Public Health

- 1 Individual vs population health
- 2 Ten essential services of public health
- 3 Primary, secondary, tertiary prevention
- 4 Introduction to determinants of health
- 5 Social class, racism, discrimination and privilege in public health systems

MODULE 2: Healthcare Systems and Delivery in the US and Globally

- 6 Approaches to healthcare
- 7 Quality and coverage
- 8 Implementation (e.g., cost, workforce)
- 9 Regulatory systems
- 10 Novel approaches to bridge healthcare and communities
- 11 Social class, racism, discrimination and privilege in healthcare delivery

MODULE 3: Population Health: Past, Present and Future

- 12 Trends in morbidity and mortality
- 13 History of public health and impact of globalization
- 14 Pragmatic challenges
- 15 Inter-professional teamwork
- 16 Diversity, equity, and inclusion

Readings, Assignments, and Assessments

MODULE 1: Core Functions of Public Health

Each session will start with a short introduction of Module 1, topics 1-5, by the instructors or guest discussants, when appropriate.

Class exercises: These will be based on case studies and readings related to the core functions of public health. This module will use case studies that emphasize different aspects of public health, such as environmental health, nutrition, genetics, etc., and that take both global and local perspectives.

Individual homework assignments: Each week students will have one short writing assignment based on the readings, class discussions and/or case study. The first exercise will include a self-reflection, in addition to reflections on individual vs population health aspects of the case.

Group assignments: Students will perform class exercises working in small groups. For Module 1, there will be a case study that brings out core functions of public health, specifically addressing topics 1-5; in addition, students will be learning how to work effectively in small groups. The first in-class group exercise might include establishing group norms and values, and defining roles for different group members. This would be submitted along with responses to questions presented in the case. Group assignments would be due once per week and group members would need to rotate responsibility for submission.

Quiz for module: At the end of module, there will be a short answer or multiple choice quiz taken in class.

Required and suggested readings (by topic 1-5):

Individual vs. population health

- Raymond L. Goldsteen, Karen Goldsteen and Terry L. Dwelle. Introduction to public health: promises and practices. 2015. New York: Springer Publishing Company. E-book available through UW Libraries.
- Geoffrey Rose. Sick individuals and sick populations. *International Journal of Epidemiology*, Volume 30, Issue 3, 1 June 2001, Pages 427–432, <https://doi.org/10.1093/ije/30.3.427>

Ten essential services of public health

- DeSalvo KB, Wang YC, Harris A, Auerbach J, Koo D, O'Carroll P. Public Health 3.0: A Call to Action for Public Health to Meet the Challenges of the 21st Century. *Prev Chronic Dis*. 2017 Sep 7;14:E78. doi: 10.5888/pcd14.170017. PubMed PMID: 28880837; PubMed Central PMCID: PMC5590510.
- DeSalvo KB. Prepare and Support Our Chief Health Strategists on the Front Lines. *Am J Public Health*. 2017 Aug;107(8):1205-1206. doi: 10.2105/AJPH.2017.303912. PubMed PMID: 28700311.
- Gregory D. Kearney. "Environmental Public Health Surveillance", *Environmental Public Health: The Practitioner's Guide*.
- Tete, F., Brown, L., & Gerding, Justin, M.P.H., R.E.H.S. (2017). Food safety program successes in providing the 10 essential environmental public health services. *Journal of Environmental Health*, 80(5), 52-54.
- Choose from: Public Health Essentials In Action Online
- <https://www.phlearningnavigator.org/training/public-health-essentials-action-online?src=search>
- Strategic Planning Within the Context of the Ten Essential Services
<https://www.phlearningnavigator.org/training/strategic-planning-within-context-ten-essential-services?src=search>

- *Optional viewing:* Hot Topics in Practice: Making the Case for Foundational Public Health Services presented by Barry King.
<http://www.nwcp.org/training/opportunities/webinars/foundational-public-health-services>

Primary, secondary and tertiary prevention

- Picture of America: Prevention, CDC.
https://www.cdc.gov/pictureofamerica/pdfs/picture_of_america_prevention.pdf
- *Chapter 26: Environmental Public Health: From Theory to Practice.* Frumkin, H. (2016).
- *Environmental Health: From global to local* (3rd ed., Public Health/Environmental Health). San Francisco, California: Jossey-Bass. (This entire book is free online through our library system.) This chapter includes a considerable amount on core functions of environmental public health, including concepts of EHP prevention.

Introduction to determinants of health

- Watch: Choose from Health Equity 101. <https://www.phlearningnavigator.org/training/health-equity-101>
- Measuring Health Disparities <https://www.phlearningnavigator.org/training/measuring-health-disparities>
- Chapter 1. Introduction to Environmental Health; What Is Environmental Health? from Frumkin, H. (2016).
- *Environmental Health: From global to local* (3rd ed., Public Health/Environmental Health). San Francisco, California: Jossey-Bass. (This entire book is free online through our library system.)
- Heisler M, Navathe A, DeSalvo K, Volpp KGM. The Role of US Health Plans in Identifying and Addressing Social Determinants of Health: Rationale and Recommendations. *Popul Health Manag.* 2018 Dec 4. doi: 10.1089/pop.2018.0173. [Epub ahead of print] PubMed PMID: 30513072.
- The Global Syndemic: Uniting Actions to Address Obesity, Undernutrition, and Climate Change. This report highlights how food and food systems relate to chronic disease and maternal and child health and this can be discussed in the context of climate change.
[https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(18\)32822-8.pdf](https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(18)32822-8.pdf)

Social class, racism, discrimination and privilege in public health systems

- Jones, Camara P. 2000. "Levels of Racism: A Theoretic Framework and a Gardener's Tale." *American Journal of Public Health* 90 (8): 1212–1215. doi: 10.2105/AJPH.90.8.1212
- Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *The Lancet.* 2017 Apr 8;389(10077):1453-63.
- Harris M, Macinko J, Jimenez G, Mullachery P. Measuring the bias against low-income country research: an Implicit Association Test. *Globalization and health.* 2017 Dec;13(1):80.
- Van Herk KA, Smith D, Andrew C. Examining our privileges and oppressions: incorporating an intersectionality paradigm into nursing. *Nursing Inquiry.* 2011 Mar;18(1):29-39.
- Watch: Ted Talk video of Mary Jones re: Allegories on race and racism (<https://www.youtube.com/watch?v=GNhcY6fTyBM>)
- Seattle & King County Racial Equity Toolkit to Assess Policies, Initiatives, Programs, and Budget Issues. https://www.seattle.gov/Documents/Departments/RSJI/RacialEquityToolkit_FINAL_August2012.pdf
- Using Genetic Technologies To Reduce, Rather Than Widen, Health Disparities. *Health Affairs,* August 2016. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2015.1476>

MODULE 2: Healthcare Systems and Delivery in the US and Globally

Each session will start with a short introduction of Module 2, topics 6-11, by the instructors or guest discussants, when appropriate.

Class exercises: These will be based on case studies and readings related to health care systems and healthcare delivery in the US and globally. This module will use case studies that emphasize different aspects of healthcare systems and delivery, such as the four types of delivery systems.

Individual assignments: Weekly assignments will be turned in at the start of class and address aspects of the case that will be discussed further in class. For example, students may be asked to address in a short written assignment, the cost of healthcare in different systems, quality of services, and/or issues around access to care.

Group assignments: In-class group exercises and group assignments will build towards five actionable items on how to improve the healthcare systems and delivery in the US or elsewhere more equitable, affordable and effective.

Quiz for module: At the end of module, there will be a short answer or multiple choice quiz taken in class.

Required and Suggested Readings (by topic 6-11):

Approaches to healthcare

- Thomas S. Bodenheimer and Kevin Grumbach. *Understanding Health Policy: a Clinical Approach*. (7th ed). New York: McGraw Hill, 2016. E-book available through UW Libraries
- *Understanding and organizing health care systems*, Chapter 11, *Textbook of Global Health*. Anne-Emanuelle Birn, Yogan Pillay, and Timothy H. Holtz. Oxford University Press, 2017.
- *Systems thinking for health systems strengthening* (Chapter 1), Editors de Savigny, Adam. WHO, 2009
- T.R. Reid: *The Healing of America* (Book used at HSERV511 covers approaches to care from a global perspective)
- Ezekiel J. Emanuel, *Reinventing American Health Care – How the Affordable Care Act Will Improve Our Terribly Complex, Blatantly Unjust, Outrageously Expensive, Grossly Inefficient, Error Prone System*. 2014. Public Affairs/Perseus Books Group

Quality and coverage

- Chapter 3 and 10 of the *Prevention of Illness* (Boddenheimer & Grumbach: *Understanding Health Policy*).

Implementation

- Chapter 2, 4, 7, 8 and 9 - (Boddenheimer & Grumbach: *Understanding Health Policy* book).
- *Cost-effectiveness of Universal BRCA1/2 Screening: Evidence-Based Decision Making*, <https://jamanetwork.com/journals/jamaoncology/article-abstract/2432464>

Regulatory systems

- Doug Farquhar, "4. Legal Framework of Environmental Public Health in the United States", *Environmental Public Health: The Practitioner's Guide* DOI: [10.2105/9780875532943ch04](https://doi.org/10.2105/9780875532943ch04)
- *Medical Ethics and Rationing of Health Care* Chapter 13. (Boddenheimer & Grumbach: *Understanding Health Policy* book).

Novel approaches to bridge healthcare and communities

- Chapter 11 of the *Prevention of Illness* (Boddenheimer & Grumbach: *Understanding Health Policy*).
- *CDC Community-Clinical Linkages*

Social class, racism, discrimination and privilege in healthcare systems and delivery

- IOM report – Unequal Treatment Confronting Racial and Ethnic Disparities in Health Care. Selected chapter(s) from: <https://www.ncbi.nlm.nih.gov/books/NBK220358/>
- AJPH qualitative analysis on social class and health among African Americans <https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.93.5.742>
- AJPH framework for racism <https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2005.077628>

MODULE 3: Population Health: Past, Present and Future

Each session will start with a short introduction of Module 3, topics 12-16, by the instructors or guest discussants, when appropriate.

Class exercises: These will be based on case studies and readings related to population health in the past, present and future, and build on the public health and healthcare delivery concepts introduced in Modules 1 and 2. Additionally, this module will include 1-2 class sessions focused on inter-professional education (IPE). One of these will include a joint exercise with students from other professions, such as law, policy, social work, nursing, medicine and pharmacy. A second session may incorporate an instructor-led discussion of IPE and an exercise that encourages students to reflect as a group on the experience.

Individual assignments: Weekly assignments will be turned in at the start of class and address aspects of the case that will be discussed further in class. For example, students will be asked to complete self-assessments after their experience in the IPE group exercise; short essay to consider sources of morbidity data for non-reportable conditions in the US and in low and middle income countries.

Group assignments: In-class group exercises and group assignments will be case-based. Additionally, for example, small group activity in class (assessed): compare and contrast data reliability of mortality statistics in comparison to morbidity statistics, using cancer incidence as an example of morbidity statistics.

Final paper: A final paper will be due at the end of the quarter that addresses a prompt (selected from among 3-4 different options) and demonstrates an understanding of key concepts in public health as they relate to challenges in healthcare delivery and population health.

Required and suggested readings:

Trends in Morbidity and Mortality

- Heart Disease Death Rates Among Blacks and Whites Aged ≥35 Years — United States, 1968–2015 Surveillance Summaries / March 30, 2018 / 67(5);1–11 https://www.cdc.gov/mmwr/volumes/67/ss/ss6705a1.htm?s_cid=ss6705a1_w
- Gallaway MS, Henley SJ, Steele CB, et al. Surveillance for Cancers Associated with Tobacco Use — United States, 2010–2014. MMWR Surveill Summ 2018;67(No. SS-12):1–42. https://www.cdc.gov/mmwr/volumes/67/ss/ss6712a1.htm?s_cid=ss6712a1_w

History of public health and impact of globalization

- The development of the discipline of public health, Section 1, Oxford Textbook of Global Public Health (6 ed.) Edited by Roger Detels, Martin Gulliford, Quarraisha Abdool Karim, and Chorh Chuan Tan.
- Paul L. Knechtges, “1. Historical Overview of Professionalism in Environmental Public Health”, *Environmental Public Health: The Practitioner’s Guide*
- Political Economy of Health and Development, Chapter 3 (part), pp 89-109; Globalization, Trade, Work, and Health, Chapter 9 pp 377-424. Textbook of Global Health. Anne-Emanuelle Birn, Yogan Pillay, and Timothy H. Holtz. Oxford University Press, 2017.
- Sustainable development goals in the age of neoliberalism, Section A1, Global Health Watch 5: An alternative world health report. People’s Health Movement, Zed Books, 2017

- Understanding models of globalization from the Alma-Ata to the neoliberal approach.
- Commentary: A brief history of folic acid in the prevention of neural tube defects, Nicholas J Wald, FRS, <https://academic.oup.com/ije/article/40/5/1154/660590>

Pragmatic challenges

- The Global Spine Care Initiative: public health and prevention interventions for common spine disorders in low- and middle-income communities. Bart N. Green, Claire D. Johnson, Scott Haldeman, et al. *European Spine Journal* (2018) 27 (Suppl 6):S838–S850. <https://link.springer.com/content/pdf/10.1007%2Fs00586-018-5635-8.pdf>
- Preventing Opioid Overdose in the Clinic and Hospital: Analgesia and Opioid Antagonists. Peglow SL, Binswanger IA. *Med Clin North Am.* 2018 Jul;102(4):621-634.

Diversity, equity, and inclusion

- A Note on the Biological Concept of Race and its application in Epidemiologic Research by Richard Cooper in *Race, Ethnicity and Health: A Public Health Reader*, THomas La Viest, Editor
- Cultural humility versus cultural competence: A critical distinction in defi... Melanie Tervalon; Jann Murray-Garcia *Journal of Health Care for the Poor and Underserved*; May 1998; 9, 2; Research Library p. 117
- Seattle & King County Racial Equity Toolkit to Assess Policies, Initiatives, Programs, and Budget Issues. https://www.seattle.gov/Documents/Departments/RSJI/RacialEquityToolkit_FINAL_August2012.pdf
- A reading on anti-oppression framework or something that illustrates the importance of “nothing about us without us”
- Take two to three tests on www.projectimplicit.org

Classroom Climate

We Are a Learning Community. The development of a supportive learning environment is fundamental to this course. As a learner-centered classroom, we all have wisdom and experience to share. Students and instructors are expected to share their knowledge, comments, critiques, feedback, and alternate opinions. Our learning space is the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. The co-creation of this respectful environment will be fostered by listening to views other than your own with an open mind, being able to understand and appreciate another person’s point of view, and the ability to articulate your own point of view using direct, respectful communication. Being conscious of not monopolizing dialogue and/or interrupting will help create this environment as well.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it. It will enrich others.
- My students’ and colleagues’ viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others’ views while inviting them to inquire into mine.
- Ask questions when I don’t understand something.
- Surface my feelings in such a way that can make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.

- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

Victoria Gardner, Assistant Dean of Diversity, Equity, and Inclusion, vg@uw.edu, is a resource for students with classroom climate concerns. Please also review the School of Public Health's [Student Concern Policy](#) for further guidance on addressing student concerns.

Course Policies

- Materials for this course will be provided on the Canvas web site. Students are expected to check the site frequently to keep up to date with the content and assignments.
- Please refrain from cell phone or other personal contact usage (email, text, etc.) during class time.
- Class preparation and participation are very important for success in this course. Please arrive on time and attend the entire class time. Instructors need to be notified in advance of any absence.
- It is the student's responsibility to obtain class materials if and when they are absent. Missing class does not excuse late assignments. Please contact the instructor(s) to request approval and for information on making up exams, homework, etc. It is at the discretion of the instructor to grant approval.
- The School of Public Health holds its faculty, staff, and students to the highest standards of professional conduct. In this class, it is expected that we will all:
 - Listen carefully and respectfully, and not talk over one another
 - Share and teach each other generously
 - Clarify the intent and impact of our comments
 - Give and receive feedback in a relationship-building manner
 - Work together to expand our knowledge by using high standards for evidence and analysis

Course Expectations

Students will learn best if they regularly complete their homework assignments on time, and actively participate during presentations, in classroom discussions, and in their small group work. In general, students who actively participate will do better in this class, both in terms of achieving the learning goals and in terms of their final grade. Given the interactive nature, we expect students to attend all or most classes in person. We do expect that students contribute to the group project while also allowing others to contribute. We also expect students present only their own work as theirs, and properly cite all intellectual content of others. We are confident all students who come prepared to class and engage with each other and the course material will be successful at achieving the course learning objectives.

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with [Disability Resources for Students](#) (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have

a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206.543.8924 or uwdrs@uw.edu or disability.uw.edu.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the [UW Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [UW Community Standards and Student Conduct](#) web site.

Writing Skills Information

Writing is an important transferable skill and is important for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. Therefore, this course includes several written assignments with the goal to help you identify areas of strength and improvement in your writing. However, if you feel you could benefit from additional opportunities to improve these skills, I have included below a list of resources at the UW and others accessible online.

UW Resources:

- Odegaard Writing and Research Center (<http://depts.washington.edu/owrc/>)
- OWRC English language support (<http://depts.washington.edu/owrc/english-language-support>)
- UW Libraries: Campus Writing Resources (<https://guides.lib.uw.edu/research/writing-resources>)
- UW Speaking Center (<http://www.com.washington.edu/speaking-center/>)
- CLUE late night writing center (<http://webster.uaa.washington.edu/asp/website/clue/writing-center/>)
- UW International and English Language Programs (<https://www.ielp.uw.edu/>)
- Foundation for International Understanding through Students (FIUTS) (<http://www.fiuts.washington.edu/>)
- Language Learning Center (<https://depts.washington.edu/lc/>)
- Center for Teaching and Learning website, "Academic support for international and multilingual students" (<http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/>)

Online Resources:

- Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)
- The Purdue Online Writing Lab: "ESL Students" (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)
- "Advice on Academic Writing" (University of Toronto) (<http://advice.writing.utoronto.ca/>)
- "Advice on Academic Writing: Using Sources" (http://advice.writing.utoronto.ca/using_sources/)
- "Online resources for writers" (Amherst) (<https://www.amherst.edu/academiclife/support/writingcenter/resourcesforwriters>)
- University of North Carolina Writing Center, "Tips and Tools" (<https://writingcenter.unc.edu/tips-and-tools/>); "Editing and Proofreading" (<https://writingcenter.unc.edu/tips-and-tools/editing-and-proofreading/>)

Appendix 3. Syllabus—PHI 512, Analytic Skills for Public Health I

Autumn 2020, 7 credits

Instructor: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Time:

Class: (3x/week, 90 min)

Lab: (1x/week, 2 hrs)

Location: TBD

Teaching Assistants: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Canvas URL: TBD

Course Prerequisites

None

Course Description

To explore problems in public health/global health research and practice using both quantitative and qualitative methods, PHI 512 and PHI 513 will introduce mixed methods approaches to produce rigorous results. The importance of contextual understanding and integration of conceptual, theoretical, and methodological frameworks will be emphasized in the first of this two-part series. PHI 512 focuses on principles and methods of epidemiology and biostatistics, including: descriptive epidemiology, data summaries and presentation, study design, measures of excess risk, causal inference, screening, measurement error, misclassification, effect modification, confounding, confidence intervals, hypothesis testing, p-values, sample size calculation, and modeling approaches such as linear regression analysis. Includes hands-on data analysis. The material in this course will position students to continue with EPI 513 and BIOST 512 in the Winter Quarter should they seek more depth in their quantitative methods training.

Course Learning Objectives

After successfully completing this course, students will be able to:

1. List, define, and calculate measures and methods used in outbreak investigation, infectious disease epidemiology, chronic disease epidemiology, disease prevention trials, and evaluation of screening tests including major measures of disease frequency used in epidemiologic research and practice and measures of association between a given risk factor and a disease or health outcome.
2. Evaluate the integrity and comparability of data and identify gaps in data sources commonly used in epidemiologic research and practice
3. Design and interpret basic numeric and visual summaries of data
4. Describe and evaluate different study design types (both experimental and observational), including their strengths and limitations, and be able to choose and implement a study design to appropriately address a specific research question.

5. Explain the difference between population parameters and sample estimates
6. Describe the major sources of bias in epidemiologic research (confounding, selection bias, missing data and measurement error) and approaches to evaluate and reduce bias
7. Define the concept of probability, conditional probability and describe the assumptions underlying the binomial, Poisson and normal probability models
8. Design and conduct studies and statistical analyses in ways that support appropriate causal inference, including adjusting for simple confounders and addressing effect modifiers.
9. Translate a research question into a statistical model/hypothesis, conduct a hypothesis test, interpret the results (including p-values and confidence intervals for means, proportions, relative risks and odds ratios) and understand how sample size impacts these results.
10. Conduct, interpret and make predictions from a simple linear regression
11. Write a clear description of the rationale, methods, results and interpretation of a scientific investigation
12. Use R and associated tools for data input, cleaning, summarization, visualization, analysis and reproducibility

Textbooks & Readings

The following textbooks are required for this course (*tentative*):

- Merrill, RM. Fundamentals of Epidemiology and Biostatistics. JB Learning, 2013.

The following textbooks are not required, but recommended if you intend to continue to Epi 513:

- Weiss NS and Koepsell TD. Epidemiologic Methods: Studying the Occurrence of Illness. 2nd Edition. Oxford University Press, 2014.

Learning Assessments & Grading

Final grades will be calculated as follows:

| Assessment Item | Grade Percentage |
|-----------------------------|-------------------------|
| Weekly online quizzes | 10% |
| Weekly Homework (see below) | 20% |
| Midterm Exam | 25% |
| Final Exam | 25% |
| Data Analysis Project | 20% |

Homework can contribute up to 20 points towards your grade. Homework submissions that are complete, submitted on time, and represent the student's own work will receive credit even if some answers are incorrect. Credit will not be given for submissions that are incomplete (i.e., those that do not fully answer all parts of all questions on the problem set). If you hand in 85% or more of your homework on time as outlined above, then you will receive the maximum possible 20 pts towards your grade.

Students are encouraged to work together or in small groups on the homework problems. A good strategy is for everyone in the group to work on the problems individually and then get together to discuss the more difficult ones. However, the final version you hand in **should reflect your own interpretation and understanding**. That is, support and assistance with developing answers is encouraged; copying answers is not.

Course Outline

| Week | Topics Covered |
|------|---|
| 1-2 | <p>Case 1: Survey</p> <p>This case study will involve a survey primarily assessing a binary outcome (eg. Whether or not the responder has health insurance). In addition, there will be categorical variables (eg. Race/ethnicity, categorized income level), and a single continuous variable (e.g. age).</p> <p><u>Key topics:</u> Study design; Sampling bias; Missing data; Measures of disease; Random Variables; Binary/Binomial RVs; Normal RVs; Parameters; Estimates; Data visualization (histograms, boxplots); Measures of center and spread; Data wrangling in R; Data analysis in R; Reproducibility</p> |
| 3-4 | <p>Case 2: Case-control study</p> <p>This case study looks at a case-control study examining the association of obstructive sleep apnea with heavy vehicle crash risk, conducted in a population of long-distance truck drivers in Western Australia. A number of potential confounders/modifiers are measured.</p> <p><u>Key topics:</u> Case-control study design; Observational vs. experimental study design; Measures of excess risk; Probability; Conditional probability; Screening; Misclassification; Confounding; Mediation; Directed acyclic graphs</p> |
| 5-6 | <p>Case 3: Cohort study</p> <p>This case study will involve a secondary analysis of the results from a randomized 2-arm clinical trial. There will be a continuous exposure (serum drug levels of Tenofovir used for pre-exposure prophylaxis to prevent HIV). The outcome will be disease rate (incidence rate HIV infection), measured in terms of person time from enrollment until HIV infection or the end of follow-up (either due to end of the study or loss to follow-up).</p> <p><u>Key topics:</u> Measures of disease; Incidence rates; Measures of excess risk; Effect modification; Graphical and tabular presentation of data; Measurement and measurement error; Selection bias due to loss-to-follow-up; Categorization of continuous variables; Sampling distributions; Confidence intervals; Hypothesis testing; Two-sample tests for binary data; Data wrangling in R; Data analysis in R.</p> <p><u>Alternative dataset:</u> Observational cohort such as Multicenter AIDS Cohort Study</p> |
| 6 | <p>Midterm Exam</p> |
| 7 | <p>Case 4: Randomized trial</p> <p>This case study will use data from a longitudinal randomized trial of a virtual reality intervention to reduce acrophobia (fear of heights). The primary outcome is the Heights Interpretation Questionnaire (HIQ) score, a continuous outcome, measured at baseline, end of treatment and one year after end of treatment. In addition to treatment arm, the dataset includes sex and age.</p> <p><u>Key topics:</u> Data description and visualization; Measures of spread and location; Study design; Experimental vs observational; Confidence intervals; One and two-sample tests for continuous data; Effect Modification for a continuous outcome; Data analysis in R; Power and Sample Size.</p> |

8-9

Case 5: Field Study

This case study is designed to determine whether the presence of water bottle refilling stations across campus shifts students towards i) drinking more water rather than sweetened beverages and ii) using refillable rather than disposable water bottles. The case requires students (in groups) to carefully define a scientific question, design an observational field research study to answer that question, collect data, analyze the data and write up the results (could form the basis for final project).

Key topics: Measures of disease frequency; Measures of association; Descriptive summaries of data; Translating a research question into a statistical hypothesis; Conditional probability; Probability models; Causal inference and confounding; Confidence intervals; Hypothesis testing; Data wrangling in R; Data analysis in R

10

Case 6: Regression

This case study looks at pulmonary forced expiratory volume (FEV) from a cross-sectional sample of 654 children aged 3 – 19. We are interested in the relationship between FEV and age (or height) and between FEV and smoking status (which is confounded by age). Sex is also included in the dataset.

Key topics: Data description and visualization; Measures of spread and location; Confidence intervals; Two-sample tests for continuous data; Correlation; Simple linear regression; Prediction and prediction intervals; Confounding; Data transformation (maybe); Data analysis in R.

Note: Since the FEV dataset is used in BIOST 512, it is preferable to use a different dataset for this case study.

Alternative dataset: WHO World Health Statistical Information System

10

Final Data Analysis Project Due

11

Final Exam

Classroom Climate

We Are a Learning Community. The development of a supportive learning environment is fundamental to this course. As a learner-centered classroom, we all have wisdom and experience to share. Students and instructors are expected to share their knowledge, comments, critiques, feedback, and alternate opinions. Our learning space is the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. The co-creation of this respectful environment will be fostered by listening to views other than your own with an open mind, being able to understand and appreciate another person's point of view, and the ability to articulate your own point of view using direct, respectful communication. Being conscious of not monopolizing dialogue and/or interrupting will help create this environment as well.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it. It will enrich others.
- My students' and colleagues' viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Ask questions when I don't understand something.
- Surface my feelings in such a way that can make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

Victoria Gardner, Assistant Dean of Diversity, Equity, and Inclusion, vg@uw.edu, is a resource for students with classroom climate concerns. Please also review the School of Public Health's [Student Concern Policy](#) for further guidance on addressing student concerns.

Course Policies

- Materials for this course will be provided on the Canvas web site. Students are expected to check the site frequently to keep up to date with the content and assignments.
- Please refrain from cell phone or other personal contact usage (email, text, etc.) during class time.
- Class preparation and participation are very important for success in this course. Please arrive on time and attend the entire class time. Instructors need to be notified in advance of any absence.
- It is the student's responsibility to obtain class materials if and when they are absent. Missing class does not excuse late assignments. Please contact the instructor(s) to request approval and for information on making up exams, homework, etc. It is at the discretion of the instructor to grant approval.
- The School of Public Health holds its faculty, staff, and students to the highest standards of professional conduct. In this class, it is expected that we will all:
 - Listen carefully and respectfully, and not talk over one another
 - Share and teach each other generously
 - Clarify the intent and impact of our comments
 - Give and receive feedback in a relationship-building manner
 - Work together to expand our knowledge by using high standards for evidence and analysis

Course Expectations

Students will learn best if they regularly complete their homework assignments on time, and actively participate during presentations, in classroom discussions, and in their small group work. In general, students who actively participate will do better in this class, both in terms of achieving the learning goals and in terms of their final grade. Given the interactive nature, we expect students to attend all or most classes in person. We do expect that students contribute to the group project while also allowing others to contribute. We also expect students present only their own work as theirs, and properly cite all intellectual content of others. We are confident all students who come prepared to class and engage with each other and the course material will be successful at achieving the course learning objectives.

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with [Disability Resources for Students](#) (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206.543.8924 or uwdrs@uw.edu or disability.uw.edu.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the [UW Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [UW Community Standards and Student Conduct](#) web site.

Writing Skills Information

Writing is an important transferable skill and is important for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. Therefore, this course includes several written assignments with the goal to help you identify areas of strength and improvement in your writing. However, if you feel you could benefit from additional opportunities to improve these skills, I have included below a list of resources at the UW and others accessible online.

UW Resources:

- Odegaard Writing and Research Center (<http://depts.washington.edu/owrc/>)
- OWRC English language support (<http://depts.washington.edu/owrc/english-language-support>)
- UW Libraries: Campus Writing Resources (<https://guides.lib.uw.edu/research/writing-resources>)
- UW Speaking Center (<http://www.com.washington.edu/speaking-center/>)
- CLUE late night writing center (<http://webster.uaa.washington.edu/asp/website/clue/writing-center/>)
- UW International and English Language Programs (<https://www.ielp.uw.edu/>)
- Foundation for International Understanding through Students (FIUTS) (<http://www.fiuts.washington.edu/>)
- Language Learning Center (<https://depts.washington.edu/lc/>)
- Center for Teaching and Learning website, "Academic support for international and multilingual students" (<http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/>)

Online Resources:

- Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)
- The Purdue Online Writing Lab: “ESL Students” (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)
- “Advice on Academic Writing” (University of Toronto) (<http://advice.writing.utoronto.ca/>)
- “Advice on Academic Writing: Using Sources” (http://advice.writing.utoronto.ca/using_sources/)
- “Online resources for writers” (Amherst) (<https://www.amherst.edu/academiclife/support/writingcenter/resourcesforwriters>)
- University of North Carolina Writing Center, “Tips and Tools” (<https://writingcenter.unc.edu/tips-and-tools/>); “Editing and Proofreading” (<https://writingcenter.unc.edu/tips-and-tools/editing-and-proofreading/>)

Appendix 4. Syllabus—PHI 513, Analytic Skills for Public Health II

Winter 2021, 3 credits

Instructor: TBD

Time: (2x/week @ 80 min)

Phone: TBD

Email: TBD

Location: TBD

Office: TBD

Office Hours: TBD

Canvas URL: TBD

Teaching Assistants: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Course Prerequisites

- PHI 511: Foundations of Public Health
- PHI 512: Analytic Skills for Public Health I

Course Description

This course will introduce qualitative and mixed methods and their relevance to rigorous public health research and practice. This course places a strong emphasis on qualitative data analysis as an integral dimension of the mixed-methods approach. The first part of the course will describe contexts for and types of qualitative research questions, introduce frameworks, study designs and sampling approaches in qualitative research, and apply methods for data collection and analysis. The second part of this course focuses on mixed methods research and the integration of quantitative measures of magnitude and frequency with qualitative measures of meaning to produce rich contextual understandings of complex behaviors, cultures, and characteristics. The third part of the course focuses on strength of evidence, distinguishes and draws parallels between implementation and discovery science; and describes alternative study designs in the context of implementation science.

Course Learning Objectives

After successfully completing this course, students will be able to:

1. Define qualitative, mixed methods, and alternative quantitative study designs and select an appropriate study design to address a defined question.
2. Explain purposive sampling and its relevance to qualitative data collection.
3. Demonstrate how to develop a qualitative focus group and interview guide, conduct qualitative data collection, and develop and apply a qualitative codebook.
4. Explain how to establish coding validity and reliability.
5. Conduct a thematic analysis and explain concept saturation.
6. Demonstrate how to report qualitative results and develop a dissemination strategy.

7. Demonstrate fluency with implementation science terms and objectives and distinguish between discovery science and implementation science research.
8. Critically review the relevant scientific and 'gray' literature, synthesize the findings across studies and sources of evidence, and position the evidence along the continuum from discovery research to programmatic scaleup.

Textbooks & Readings

Example readings include:

Module 1: Qualitative Methods

- Tolley EE, Ulin PR, Mack N, Succop SM, Robinson ET. *Qualitative Methods in Public Health*. John Wiley & Sons; 2016
- Krueger RA, Casey MA. *Focus groups: A practical guide for applied research*. Sage publications; 2014
- Hermanowicz JC. The great interview: 25 strategies for studying people in bed. *Qualitative sociology*. 2002;25:479-499.
- O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*. 2014;89:1245-1251.
- Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International journal for quality in health care*. 2007;19:349-357.

Module 2: Integrating Analytic Methods to Understand and Solve Health Challenges

- Lau J, Ioannidis JPA, Schmid CH. Summing up evidence: one answer is not always enough. *Lancet* 1998;351:123-7.
- Armstrong-Moore R, Haighton C, Davinson N, Ling J. Interventions to reduce the negative effects of alcohol consumption in older adults: a systematic review. *BMC Public Health*. 2018;18:302.
- Fetters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs-principles and practices. *Health Serv Res*. 2013;48:2134-56.

Module 3: Assessing evidence, alternative study designs, and introduction to implementation science

- Loudon K, Treweek S, Sullivan F, Donnan P, Thorpe KE, Zwarenstein M. The PRECIS-2 tool: designing trials that are fit for purpose. *BMJ*. 2015;350:h2147.
- Brown CH, Curran G, Palinkas LA, Aarons GA, Wells KB, Jones L, Collins LM, Duan N, Mittman BS, Wallace A, Tabak RG, Ducharme L, Chambers DA, Neta G, Wiley T, Landsverk J, Cheung K, Cruden G. An Overview of Research and Evaluation Designs for Dissemination and Implementation. *Annu Rev Public Health*. 2017;38:1-22.
- Hemming K, Eldridge S, Forbes G, Weijer C, Taljaard M. How to design efficient cluster randomised trials. *BMJ*. 2017;358:j3064.
- Fok CC, Henry D, Allen J. Research Designs for Intervention Research with Small Samples II: Stepped Wedge and Interrupted Time-Series Designs. *Prev Sci*. 2015;16(7):967-77.
- Inwani I, Chhun N, Agot K, Cleland CM, Buttolph J, Thirumurthy H, Kurth AE. High-Yield HIV Testing, Facilitated Linkage to Care, and Prevention for Female Youth in Kenya (GIRLS Study): Implementation Science Protocol for a Priority Population. *JMIR Res Protoc*. 2017;6(12):e179.
- Smith LM, Kaufman JS, Strumpf EC, Lévesque LE. Effect of human papillomavirus (HPV) vaccination on clinical indicators of sexual behaviour among adolescent girls: the Ontario Grade 8 HPV Vaccine Cohort Study. *CMAJ*. 2015;187(2):E74-81.

- Neta G, Brownson RC, Chambers DA. Opportunities for Epidemiologists in Implementation Science: A Primer. *Am J Epidemiol.* 2018;187:899-910.
- Gimbel S, Rustagi AS, Robinson J, et al. Evaluation of a Systems Analysis and Improvement Approach to Optimize Prevention of Mother-To-Child Transmission of HIV Using the Consolidated Framework for Implementation Research. *J Acquir Immune Defic Syndr.* 2016;72 Suppl 2:S108-16.
- Tabak RG, Khoong EC, Chambers DA, Brownson RC. Bridging research and practice: models for dissemination and implementation research. *Am J Prev Med.* 2012;43:337-50.

Learning Assessments & Grading

Final grades will be calculated as follows:

| Assessment Item | Grade Percentage |
|---|-------------------------|
| Participation (discussion boards, small group engagement) | 10% |
| Homework (credit/no-credit) | 25% |
| Weekly timed quizzes (scored, low stakes) | 15% |
| Qualitative data collection and analysis assignments | 25% |
| Final project (individual) | 25% |

Homework can contribute up to 25 percent towards your grade. Homework submissions that are complete, submitted on time, and represent the student's own work will receive credit even if some answers are incorrect. Credit will not be given for submissions that are incomplete (i.e., those that do not fully answer all parts of all questions on the problem set). If you hand in 85% or more of your homework on time as outlined above, then you will receive the maximum possible 20 percent towards your grade.

Students are encouraged to work together or in small groups on the homework problems. A good strategy is for everyone in the group to work on the problems individually and then get together to discuss the more difficult ones. However, the final version you hand in **should reflect your own interpretation and understanding**. That is, support and assistance with developing answers is encouraged; copying answers is not.

Course Outline

| Session | Topic Covered Activities/Assessments/Assignments |
|--|---|
| MODULE 1: Qualitative Methods (13 sessions) | |
| 1 | Limitations of quantitative research and the need for qualitative methods and mixed designs |
| 2 | Frameworks for qualitative research |
| 3 | Qualitative Methods |
| 4-6 | Data Collection: Asking questions, Interviews and Focus Groups |
| Qualitative data exercise 1 due | |
| 7 | Purposive Sampling |
| Qualitative data exercise 2 due | |
| 8-9 | Qualitative Data Analysis--Using computer software |

10-11 Coding, Interpretation, Inter-coder reliability

Qualitative data exercise 3 due

12-13 Displaying data, writing results, and dissemination

MODULE 2: Integrating Analytic Methods to Understand and Solve Health Challenges (3 sessions)

14 Mixed methods/iterative qualitative and quantitative

15 Examples and best practices

16 Summarizing, reporting, and dissemination

MODULE 3: Assessing evidence, alternative study designs, and introduction to IS (4 sessions)

17 Strength of evidence, systematic reviews

18-19 Alternative study designs - including levels of intervention and effect

20 Introduction to implementation science

Final project due

Classroom Climate

We Are a Learning Community. The development of a supportive learning environment is fundamental to this course. As a learner-centered classroom, we all have wisdom and experience to share. Students and instructors are expected to share their knowledge, comments, critiques, feedback, and alternate opinions. Our learning space is the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. The co-creation of this respectful environment will be fostered by listening to views other than your own with an open mind, being able to understand and appreciate another person's point of view, and the ability to articulate your own point of view using direct, respectful communication. Being conscious of not monopolizing dialogue and/or interrupting will help create this environment as well.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it. It will enrich others.
- My students' and colleagues' viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Ask questions when I don't understand something.
- Surface my feelings in such a way that can make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.

- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

Victoria Gardner, Assistant Dean of Diversity, Equity, and Inclusion, vg@uw.edu, is a resource for students with classroom climate concerns. Please also review the School of Public Health's [Student Concern Policy](#) for further guidance on addressing student concerns.

Course Policies

- Materials for this course will be provided on the Canvas web site. Students are expected to check the site frequently to keep up to date with the content and assignments.
- Please refrain from cell phone or other personal contact usage (email, text, etc.) during class time.
- Class preparation and participation are very important for success in this course. Please arrive on time and attend the entire class time. Instructors need to be notified in advance of any absence.
- It is the student's responsibility to obtain class materials if and when they are absent. Missing class does not excuse late assignments. Please contact the instructor(s) to request approval and for information on making up exams, homework, etc. It is at the discretion of the instructor to grant approval.
- The School of Public Health holds its faculty, staff, and students to the highest standards of professional conduct. In this class, it is expected that we will all:
 - Listen carefully and respectfully, and not talk over one another
 - Share and teach each other generously
 - Clarify the intent and impact of our comments
 - Give and receive feedback in a relationship-building manner
 - Work together to expand our knowledge by using high standards for evidence and analysis

Course Expectations

Students will learn best if they regularly complete their homework assignments on time, and actively participate during presentations, in classroom discussions, and in their small group work. In general, students who actively participate will do better in this class, both in terms of achieving the learning goals and in terms of their final grade. Given the interactive nature, we expect students to attend all or most classes in person. We do expect that students contribute to the group project while also allowing others to contribute. We also expect students present only their own work as theirs, and properly cite all intellectual content of others. We are confident all students who come prepared to class and engage with each other and the course material will be successful at achieving the course learning objectives.

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with [Disability Resources for Students](#) (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but

not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206.543.8924 or uwdrs@uw.edu or disability.uw.edu.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the [UW Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [UW Community Standards and Student Conduct](#) web site.

Writing Skills Information

Writing is an important transferable skill and is important for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. Therefore, this course includes several written assignments with the goal to help you identify areas of strength and improvement in your writing. However, if you feel you could benefit from additional opportunities to improve these skills, I have included below a list of resources at the UW and others accessible online.

UW Resources:

- Odegaard Writing and Research Center (<http://depts.washington.edu/owrc/>)
- OWRC English language support (<http://depts.washington.edu/owrc/english-language-support/>)
- UW Libraries: Campus Writing Resources (<https://guides.lib.uw.edu/research/writing-resources>)
- UW Speaking Center (<http://www.com.washington.edu/speaking-center/>)
- CLUE late night writing center (<http://webster.uua.washington.edu/asp/website/clue/writing-center/>)
- UW International and English Language Programs (<https://www.ielp.uw.edu/>)
- Foundation for International Understanding through Students (FIUTS) (<http://www.fiuts.washington.edu/>)
- Language Learning Center (<https://depts.washington.edu/lc/>)
- Center for Teaching and Learning website, "Academic support for international and multilingual students" (<http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/>)

Online Resources:

- Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)
- The Purdue Online Writing Lab: "ESL Students" (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)
- "Advice on Academic Writing" (University of Toronto) (<http://advice.writing.utoronto.ca/>)
- "Advice on Academic Writing: Using Sources" (http://advice.writing.utoronto.ca/using_sources/)
- "Online resources for writers" (Amherst) (<https://www.amherst.edu/academiclife/support/writingcenter/resourcesforwriters>)
- University of North Carolina Writing Center, "Tips and Tools" (<https://writingcenter.unc.edu/tips-and-tools/>); "Editing and Proofreading" (<https://writingcenter.unc.edu/tips-and-tools/editing-and-proofreading/>)

Appendix 5. Syllabus—PHI 514, Determinants of Health

Winter 2021, 3 credits

Instructor: TBD

Time: (2x/week @ 1.5 hours)

Phone: TBD

Email: TBD

Location: TBD

Office: TBD

Office Hours: TBD

Canvas URL: TBD

Teaching Assistants: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Course Prerequisites

- PHI 511: Foundations of Public Health
- PHI 512: Analytic Skills for Public Health I

Course Description

Many factors combine and interact to affect the health of individuals and communities. This course will describe and apply frameworks for understanding determinants of health at multiple levels and within different systems. Course material will emphasize individual- and family-level determinants, physical and social environments, population-level determinants, and systems dynamics. Students will learn how to apply theory and how to interpret and weigh evidence to identify and prioritize health determinants for public health research, practice, and policy.

Course Learning Objectives

After successfully completing this course, students will be able to:

1. Recognize and discuss major determinants of health in relation to trends of morbidity and mortality
2. Interpret findings of research studies and explain the value of evidence in evaluating the impact of health determinants.
3. Identify and examine how structural bias, social and other inequities, and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels
4. Apply systems thinking to explain an ecological perspective on the connections among human health, animal health, and ecosystem health
5. Examine how policies impact public health and health equity

Textbooks & Readings

The following textbooks/readings are recommended, but not required:

- Frumkin H, ed. *Environmental health: From global to local*. John Wiley & Sons; 2016 Feb.
- *Reimagining Global Health: An Introduction*. 2013. Paul Farmer, Jim Yong Kim, Arthur Kleinman, and Matthew Basilico. University of California Press: Berkeley and Los Angeles (selected chapters on understanding global processes and health).

- *Textbook of International Health: Global Health in a Dynamic World*. 2009. Anne-Imanuelle Birn, Yogan Pillay, and Timothy Holtz. Oxford University Press: Oxford. (chapter on social determinants and other chapters on global policies and historical roots of global inequities).
- K. Glanz, B.K. Rimer & K. Viswanath (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice*, (4th ed). San Francisco: Jossey-Bass Publishers. (selected chapters)

Learning Assessments & Grading

Final grades will be calculated as follows:

| Assessment Item | Grade Percentage |
|--|-------------------------|
| <p>Written Paper</p> <p>Choose one determinant of health and a health outcome. Briefly summarize what is known about the relationship between that determinant and the health outcome you have chosen. Draw and describe conceptual model linking your determinant to the health outcome and describe at least two pathways linking the two. These may be pathways that have been empirically tested or potential pathways based on theory or other related research. Your paper should draw on both assigned readings and your own independent research. The assignment should be 4-5 double spaced pages.</p> | 30% |
| <p>Group Presentation</p> <p>In a 5-10 minute group oral presentation in class, describe how structural bias impacts a health outcome and identify potential solutions.</p> | 25% |
| <p>Cumulative Class Project</p> <p>Use one of the frameworks discussed in the course to describe the impact of multiple determinants on a specific health outcome.</p> | 30% |
| <p>Class Participation and Activities:</p> <p>In lectures and discussions, active participation is required. Students are asked to come to class prepared to engage in discussions, conduct quick writes, work in groups, and other activities. In some cases, students will be asked to turn in-class assignments in at the end of class or on canvas. At the end of class, students will also be asked to evaluate the participation of other students in assigned groups. In terms of attendance, students should prepare for the unexpected (e.g., always try to attend so that if something happens, such as an illness later in quarter, there is already a buffer). Any personal plans (e.g., flight arrangements) should be scheduled during the regular quarterly breaks in order to avoid unexcused absences.</p> | 15% |

Course Outline

MODULE 1: *Setting the Stage: Hazards, Risks, Systems, and Frameworks (4 class sessions or 6 contact hours)*

Topics:

- Introduction to relevant terms and their definitions, including: health, hazard, health equity, health disparities, risk, exposure, vulnerability, prevention, systems, and ecology
- Introduction to ecological and systems thinking, complex adaptive systems, and integrated approaches to studying and protecting health across disciplines and scales
- Introduction to frameworks and mental models for understanding and advancing population health and to strategies for integrating systems thinking with major frameworks and paradigms in public health
- Introduction to the risk paradigm and its core tenets, characterization of the path from hazard exposure to disease, risk assessment, metrics and expressions of risk, and Rose's "prevention paradoxes"
- Introduction to specific central frameworks, including the socio-ecological framework and planetary health, and to the interplay between theory and practice
- Introduction to evaluation and use of evidence related to determinants of health

Potential Readings:

- Kindig D, Stoddart G. What is population health? *American journal of public health*. 2003 Mar;93(3):380-3.
- Syme SL, Balfour JL. Social determinants of disease. In: Wallace RB, ed. *Public Health and Preventive Medicine*. 14th ed. Stamford, Conn: Appleton & Lange; 1998:795.
- Glanz K, Bishop DB. The role of behavioral science theory in development and implementation of public health interventions. *Annual review of public health*. 2010 Apr 21;31:399-418.
- Rose G. Sick individuals and sick populations. *International journal of epidemiology*. 2001 Jun 1;30(3):427-32.
- Series of YouTube videos on complex adaptive systems, currently used in ENVH 511
- Trochim WM, Cabrera DA, Milstein B, Gallagher RS, Leischow SJ. Practical challenges of systems thinking and modeling in public health. *American journal of public health*. 2006 Mar;96(3):538-46.
- Dooley KJ. A complex adaptive systems model of organization change. *Nonlinear dynamics, psychology, and life sciences*. 1997 Jan 1;1(1):69-97.
- Frieden TR. (2010). A framework for public health action: the health impact pyramid. *American Journal of Public Health*. 100(4): 590-595. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836340/>
- Whitmee S, Haines A, Beyrer C, Boltz F, Capon AG, de Souza Dias BF, Ezeh A, Frumkin H, Gong P, Head P, Horton R. Safeguarding human health in the Anthropocene epoch: report of The Rockefeller Foundation–Lancet Commission on planetary health. *The Lancet*. 2015 Nov 14;386(10007):1973-2028.
- Green LW & Kreuter MW. (2010). Evidence hierarchies vs. synergistic interventions. *American Journal of Public Health*. 100(10): 1824-5. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2936990/>
- Rooney AA, Boyles AL, Wolfe MS, Bucher JR, Thayer KA. Systematic review and evidence integration for literature-based environmental health science assessments. *Environmental health perspectives*. 2014 Jul;122(7):711.

MODULE 2: Individual and Interpersonal Determinants (4 class sessions or 6 contact hours)

Topics:

- Introduction to individual and interpersonal level determinants, including genetic, behavioral
- Interactions between determinants in various interpersonal contexts (e.g., families, peers)
- Impact of individual and interpersonal level determinants on health behaviors (including relevant theories, such as Health Belief Model, Stage Theories, Social Networks and Social Support)
- Introduction to connections between individual and interpersonal level determinants and interactions with other factors like the physical environment

Potential Readings:

- Cox MJ, Paley B. Families as systems. Annual review of psychology. 1997 Feb;48(1):243-67.
- Ross LE, Dobinson C, Eady A. Perceived determinants of mental health for bisexual people: A qualitative examination. American journal of public health. 2010 Mar;100(3):496-502.
- Bauman AE, Reis RS, Sallis JF, Wells JC, Loos RJ, Martin BW, Lancet Physical Activity Series Working Group. Correlates of physical activity: why are some people physically active and others not?. The lancet. 2012 Jul 21;380(9838):258-71.
- Giles-Corti B, Donovan RJ. Relative influences of individual, social environmental, and physical environmental correlates of walking. American journal of public health. 2003 Sep;93(9):1583-9.
- Auchincloss AH, Diez Roux AV. A new tool for epidemiology: the usefulness of dynamic-agent models in understanding place effects on health. American journal of epidemiology. 2008 May 13;168(1):1-8.
- Theory at a Glance, National Cancer Institute
<http://www.sbccimplementationkits.org/demandrnmch/wp-content/uploads/2014/02/Theory-at-a-Glance-A-Guide-For-Health-Promotion-Practice.pdf>
- K. Glanz, B.K. Rimer & K. Viswanath (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice*, (4th ed., pp. 189-207). San Francisco: Jossey-Bass Publishers. (selected chapters)
- Thoits PA. Mechanisms linking social ties and support to physical and mental health. J Health Soc Behav. 2011 Jun;52(2):145-61. doi: 10.1177/0022146510395592. Review. PubMed PMID: 21673143.

MODULE 3: Physical Environment and Neighborhood Level Determinants (4 class sessions or 6 contact hours)

Topics:

- Environmental hazards, environmental media, routes of exposure, and dose-response functions
- Case studies of chemical, physical, biologic, and other hazards in specific contexts, including potentially arsenic in South Asia, pesticides in food, particulates in air, and heat in the workplace
- Cross-sectional and longitudinal associations between place and health at middle scales (neighborhood to region)
- Principal determinants of health at middle scales, including demographics, wealth, health care access, education, fertility, and social capital
- Interactions between determinants at the fine and middle scales
- Relevant theories and models of health promotion, change management, innovation, and implementation at the middle scale, including diffusion of innovation, organizational change, community development, community organizing, composition vs. context

Potential Readings:

- Nweke OC, Sanders III WH. Modern environmental health hazards: a public health issue of increasing significance in Africa. *Environmental Health Perspectives*. 2009 Jun;117(6):863.
- Jokela M. Are neighborhood health associations causal? A 10-year prospective cohort study with repeated measurements. *American journal of epidemiology*. 2014 Sep 26;180(8):776-84.
- Curl CL, Fenske RA, Elgethun K. Organophosphorus pesticide exposure of urban and suburban preschool children with organic and conventional diets. *Environmental health perspectives*. 2003 Mar;111(3):377.
- Prepared readings and videos on arsenic in South Asia, pesticides in food, air pollution, and heat in the workplace from ENV H 511
- Selected readings from Frumkin, *Environmental Health: From Global to Local*, including chapters on Toxicology, Exposure Assessment, and Water and Health.
- K. Glanz, B.K. Rimer & K. Viswanath (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice*, (4th ed., pp. 189-207). San Francisco: Jossey-Bass Publishers. (selected chapters)
- Diez Roux, A. V. (2016). Neighborhoods and Health: What Do We Know? What Should We Do? *American Journal of Public Health*, 106(3), 430–431.
- Anna Zajacova and Elizabeth M. Lawrence. The Relationship Between Education and Health: Reducing Disparities Through a Contextual Approach. *Annual Review of Public Health* 2018 39:1, 273-289
- Morello-Frosch R and Shenassa ED. The environmental "riskscape" and social inequality: implications for explaining maternal and child health disparities. *Environ Health Perspect*, 2006. 114(8): 1150-3.
- Elo IT. 2009. Social class differentials in health and mortality: Patterns and explanations in comparative perspective. *Annu Rev Sociol* 35:553-572.
- Mehra R, Boyd LM, Ickovics JR. Racial residential segregation and adverse birth outcomes: A systematic review and meta-analysis. *Soc Sci Med*. 2017 Oct;191:237-250. doi: 10.1016/j.socscimed.2017.09.018. Epub 2017 Sep 11.

MODULE 4: *Population and Global Level Determinants and Synthesis (4 class sessions or 6 contact hours)*

Topics:

- Large scale social determinants of health including structural racism and bias
- Development trajectories, the epidemiological and environmental risk transitions, and health
- Climate change and other planetary health challenges
- Synthesis of determinants of health at different scales and over time: case studies of different synthetic approaches

Potential Readings:

- Link BG, Phelan JC. Stigma and its public health implications. *The Lancet*. 2006 Feb 11;367(9509):528-9.
- Murray CJ, Kulkarni SC, Michaud C, Tomijima N, Bulzacchelli MT, Iandiorio TJ, Ezzati M. Eight Americas: investigating mortality disparities across races, counties, and race-counties in the United States. *PLoS medicine*. 2006 Sep 12;3(9):e260.
- Smith KR, Ezzati M. How environmental health risks change with development: the epidemiologic and environmental risk transitions revisited. *Annu. Rev. Environ. Resour.*. 2005 Nov 21;30:291-333.

- Frumkin H, Haines A. Global Environmental Change and Noncommunicable Disease Risks. Annual review of public health. 2019 Jan 11;40.
- Rabinowitz PM, Pappaioanou M, Bardosh KL, Conti L. A planetary vision for one health. BMJ global health. 2018 Oct 1;3(5):e001137.
- Ji JS, Zhu A, Bai C, Wu CD, Yan L, Tang S, Zeng Y, James P. Residential greenness and mortality in oldest-old women and men in China: a longitudinal cohort study. The Lancet Planetary Health. 2019 Jan 1;3(1):e17-25.
- Forman F, Solomon G, Pezzoli K, Morello-Frosch R. Bending the Curve and Closing the Gap: Climate Justice and Public Health.
- Guo L, Luo J, Yuan M, Huang Y, Shen H, Li T. The influence of urban planning factors on PM2.5 pollution exposure and implications: A case study in China based on remote sensing, LBS, and GIS data. Science of The Total Environment. 2019 Apr 1;659:1585-96.
- Algunaibet IM, Fernández CP, Galán-Martín Á, Huijbregts MA, Mac Dowell N, Guillén-Gosálbez G. Powering sustainable development within planetary boundaries. Energy & Environmental Science. 2019.
- Fanning AL, O'Neill DW. The Wellbeing–Consumption paradox: Happiness, health, income, and carbon emissions in growing versus non-growing economies. Journal of Cleaner Production. 2019 Mar 1;212:810-21.
- Watts N, Adger WN, Agnolucci P, Blackstock J, Byass P, Cai W, Chaytor S, Colbourn T, Collins M, Cooper A, Cox PM. Health and climate change: policy responses to protect public health. The Lancet. 2015 Nov 7;386(10006):1861-914.
- Fullman N, Barber RM, Abajobir AA, Abate KH, Abbafati C, Abbas KM, Abd-Allah F, Abdulkader RS, Abdulle AM, Abera SF, Aboyans V. Measuring progress and projecting attainment on the basis of past trends of the health-related Sustainable Development Goals in 188 countries: an analysis from the Global Burden of Disease Study 2016. The Lancet. 2017 Sep 16;390(10100):1423-59.
- Hicken, M. T., Kravitz-Wirtz, N., Durkee, M., & Jackson, J. S. (2018). Racial inequalities in health: Framing future research. *Social Science & Medicine*, 199(C), 11-18.
- Came, H., & Griffith, D. (2018). Tackling racism as a “wicked” public health problem: Enabling allies in anti-racism praxis. *Social Science & Medicine*, 199, 181-188.
- Williams DR and Collins C. 2001. Racial residential segregation: a fundamental cause of racial disparities in health. Public Health Reports 116:404-16.
- Viruell-Fuentes EA, Miranda PY, Abdulrahim S. More than culture: Structural racism, intersectionality theory, and immigrant health. Social Science Medicine, 2012, 75(12):2099-106.
- National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on Community-Based Solutions to Promote Health Equity in the United States; Baciu A, Negussie Y, Geller A, et al., editors. Communities in Action: Pathways to Health Equity. Washington (DC): National Academies Press (US); 2017 Jan 11. 3, The Root Causes of Health Inequity.
- Osypuk TL, Joshi P, Geronimo K, Acevedo-Garcia D. Do Social and Economic Policies Influence Health? A Review. Curr Epidemiol Rep. 2014 Sep 1;1(3):149-164.
- Hicken M, Gragg R, Hu H. How cumulative risks warrant a shift in our approach to racial health disparities: the case of lead, stress, and hypertension. Health Aff (Millwood). 2011 Oct;30(10):1895-901. doi: 10.1377/hlthaff.2010.1241. Glymour MM. Policies as tools for research and translation in social epidemiology. Social Epidemiology. 2014 Jul 9:452-77.
- Raifman J, Moscoe E, Austin SB, McConnell M. Difference-in-differences analysis of the association between state same-sex marriage policies and adolescent suicide attempts. JAMA pediatrics. 2017 Apr 1;171(4):350-6.

Classroom Climate

We Are a Learning Community. The development of a supportive learning environment is fundamental to this course. As a learner-centered classroom, we all have wisdom and experience to share. Students and instructors are expected to share their knowledge, comments, critiques, feedback, and alternate opinions. Our learning space is the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. The co-creation of this respectful environment will be fostered by listening to views other than your own with an open mind, being able to understand and appreciate another person's point of view, and the ability to articulate your own point of view using direct, respectful communication. Being conscious of not monopolizing dialogue and/or interrupting will help create this environment as well.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it. It will enrich others.
- My students' and colleagues' viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Ask questions when I don't understand something.
- Surface my feelings in such a way that can make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

Victoria Gardner, Assistant Dean of Diversity, Equity, and Inclusion, vg@uw.edu, is a resource for students with classroom climate concerns. Please also review the School of Public Health's [Student Concern Policy](#) for further guidance on addressing student concerns.

Course Policies

- Materials for this course will be provided on the Canvas web site. Students are expected to check the site frequently to keep up to date with the content and assignments.
- Please refrain from cell phone or other personal contact usage (email, text, etc.) during class time.
- Class preparation and participation are very important for success in this course. Please arrive on time and attend the entire class time. Instructors need to be notified in advance of any absence.
- It is the student's responsibility to obtain class materials if and when they are absent. Missing class does not excuse late assignments. Please contact the instructor(s) to request approval and for information on making up exams, homework, etc. It is at the discretion of the instructor to grant approval.
- The School of Public Health holds its faculty, staff, and students to the highest standards of professional conduct. In this class, it is expected that we will all:
 - Listen carefully and respectfully, and not talk over one another
 - Share and teach each other generously

- Clarify the intent and impact of our comments
- Give and receive feedback in a relationship-building manner
- Work together to expand our knowledge by using high standards for evidence and analysis

Course Expectations

Students will learn best if they regularly complete their homework assignments on time, and actively participate during presentations, in classroom discussions, and in their small group work. In general, students who actively participate will do better in this class, both in terms of achieving the learning goals and in terms of their final grade. Given the interactive nature, we expect students to attend all or most classes in person. We do expect that students contribute to the group project while also allowing others to contribute. We also expect students present only their own work as theirs, and properly cite all intellectual content of others. We are confident all students who come prepared to class and engage with each other and the course material will be successful at achieving the course learning objectives.

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with [Disability Resources for Students](#) (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206.543.8924 or uwdrs@uw.edu or disability.uw.edu.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the [UW Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [UW Community Standards and Student Conduct](#) web site.

Writing Skills Information

Writing is an important transferable skill and is important for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. Therefore, this course includes several written assignments with the goal to help you identify areas of strength and improvement in your writing. However, if you feel you could benefit from additional opportunities to improve these skills, I have included below a list of resources at the UW and others accessible online.

UW Resources:

- Odegaard Writing and Research Center (<http://depts.washington.edu/owrc/>)
- OWRC English language support (<http://depts.washington.edu/owrc/english-language-support>)
- UW Libraries: Campus Writing Resources (<https://guides.lib.uw.edu/research/writing-resources>)
- UW Speaking Center (<http://www.com.washington.edu/speaking-center/>)
- CLUE late night writing center (<http://webster.uaa.washington.edu/asp/website/clue/writing-center/>)
- UW International and English Language Programs (<https://www.ielp.uw.edu/>)
- Foundation for International Understanding through Students (FIUTS) (<http://www.fiuts.washington.edu/>)
- Language Learning Center (<https://depts.washington.edu/lhc/>)
- Center for Teaching and Learning website, “Academic support for international and multilingual students” (<http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/>)

Online Resources:

- Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)
- The Purdue Online Writing Lab: “ESL Students” (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)
- “Advice on Academic Writing” (University of Toronto) (<http://advice.writing.utoronto.ca/>)
- “Advice on Academic Writing: Using Sources” (http://advice.writing.utoronto.ca/using_sources/)
- “Online resources for writers” (Amherst) (<https://www.amherst.edu/academiclife/support/writingcenter/resourcesforwriters>)
- University of North Carolina Writing Center, “Tips and Tools” (<https://writingcenter.unc.edu/tips-and-tools/>); “Editing and Proofreading” (<https://writingcenter.unc.edu/tips-and-tools/editing-and-proofreading/>)

Appendix 6. Syllabus—PHI 515, Implementing Public Health Interventions

Spring 2021, 4 credits

Instructor: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Time: (2x/week @ 2 hours)

Location: TBD

Canvas URL: TBD

Teaching Assistants: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Course Prerequisites

- PHI 511—Foundations of Public Health (Autumn)
- PHI 512—Analytic Skills for Public Health (Autumn)
- PHI 513—Analytic Skills for Public Health II (Winter)
- PHI 514—Determinants of Health (Winter)

Course Description

In this course students will use evidence and ethics in intervention design, conduct, and evaluation. The concepts, models, and methods of implementation science in public health will be emphasized across multiple levels of the socio-ecological framework. Ethical considerations will include assessing and acting on the values and preferences of stakeholder groups and striving for equity in potential outcomes. Through lecture, small group discussion, poster presentation and an intervention project paper, students will learn how to go from evidence to action, building on the perspectives and skills taught in the previous core courses.

Course Learning Objectives

After successfully completing this course, students will be able to:

1. Analyze how primary, secondary, and tertiary prevention is used in the design of implementation of population health interventions
2. Use evidence and ethics to design, implement, and evaluate interventions to promote population health
3. Apply models of implementation, including the Consolidated Framework for Implementation Research, in designing strategies for building partnerships in the implementation of public health interventions
4. Apply understanding of cultural values and practices in designing, implementing, and evaluating public health interventions

5. Design a population-based policy, program, project, or intervention
6. Use basic principles of budgeting and resource management in designing and implementing public health programs
7. Design methods to evaluate public health interventions

Textbooks & Readings

The following textbook is recommended, but not required:

- Planning, Implementing, & Evaluating Health Promotion Programs: A Primer (7th Edition) 7th Edition by James F. McKenzie (Author), Brad L. Neiger, Rosemary Thackeray

Learning Assessments & Grading

Final grades will be calculated as follows:

| Assessment Item | Grade Percentage |
|---|-------------------------|
| Poster | 20% |
| Final Intervention proposal | 30% |
| Milestone assignments toward final proposal (3 * 5% each) | 15% |
| Intervention outline | 10% |
| Class Participation | 10% |
| Module Quizzes (3 * 5% each) | 15% |

Over the course of the quarter, mastery of competencies will be assessed in a variety of ways. All three modules will conclude with a short quiz in order to assess mastery of specific concepts. Over the course of the quarter, students will work in groups to produce a written proposal and evaluation plan for an intervention design to address a local or global public health problem. Possible public health problems will be drawn across domains representing resource rich and resource poor areas, non-communicable and infectious disease, and prevention and response strategies. Groups will present a poster at the conclusion of the quarter to share their intervention proposal with other students, and students will evaluate other posters.

Course Outline

| Session | Topic Covered Activities/Assessments/Assignments |
|--|--|
| MODULE 1: Design Interventions (1 credit) | |
| 1 | Risk Management, Types of interventions, Conceptual Frameworks <i>Suggested readings</i> <ul style="list-style-type: none"> ▪ Glasgow, R. E., T. M. Vogt, et al. (1999). "Evaluating the Public Health Impact of Health Promotion Interventions: The RE-AIM Framework." <i>American Journal of Public Health</i> 89(9): 1322-1327. ▪ Damschroder, L. J., D. C. Aron, et al. (2009). "Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science." <i>Implementation Science</i> 4: 50. ▪ Yokota, Fumie, and Kimberly M. Thompson. "Value of information analysis in environmental health risk management decisions: past, present, and future." <i>Risk analysis: an international journal</i> 24.3 (2004): 635-650. |

2 Ethics, evidence and theory in intervention design

Suggested readings

- CDC Guide to Community Preventive Services, Cochrane Reviews, Research tested intervention programs (web-based resources), CDC Diffusion of Effective Behavioral Interventions (DEBIs: <https://effectiveinterventions.cdc.gov/>)
- Glanz K, Bishop DB. The role of behavioral science theory in development and implementation of public health interventions. *Annu Rev Public Health*. 2010;31:399-418. doi: 10.1146/annurev.publhealth.012809.103604. Review. PubMed PMID: 20070207.

3 Level of Implementation of Interventions and Level of Prevention of Interventions

Suggested readings

- Jardine, Cindy, et al. "Risk management frameworks for human health and environmental risks." *Journal of Toxicology and Environmental Health Part B: Critical Reviews* 6.6 (2003): 569-718.
- National Ethics Advisory Committee. 2012. *Ethical Guidelines for Intervention Studies: Revised edition*. Wellington: Ministry of Health.

4 Goal Setting and Logic Models in Intervention Design and Planning

Suggested readings

- Annie E Casey Foundation, "Theory of Change: A Practical Tool for Action, Results, and Learning" (<https://www.aecf.org/resources/theory-of-change/>)
- RAND Corporation and University of South Carolina. Getting to Outcomes. Available at: <http://www.rand.org/health/projects/getting-to-outcomes.html>
- Renger R, Titcomb A. A three-step model to teaching logic model. *American Journal of Evaluation*. 2002;23(4):493-503.

5 Cultural Humility and Community-based Participatory Research

Suggested reading

- Krieger J, Allen C, Cheadle A, Ciske S, Schier J, Senturia K, et al. Using community-based participatory research to address social determinants of health: lessons learned from Seattle Partners for Healthy Communities. *Health Education & Behavior*. 2002;29(3):361-382.

6 Design: putting it all together

Suggested reading

- World Bank, World Development Report 2015, Chapter 11 “Adaptive Design, Adaptive Interventions” (<http://www.worldbank.org/en/publication/wdr2015>)

Assessment: End of Module 1 Quiz

Assessment: Milestone assignment due on Outline of Intervention Plan

MODULE 2: Implement Interventions (1 credit)

- 7
- Contexts for Implementation 1: Inner setting (where it takes place)
 - Hierarchy of controls -- workplace interventions

Suggested readings

- Goldenhar, Linda M., et al. "The intervention research process in occupational safety and health: an overview from the National Occupational Research Agenda Intervention Effectiveness Research team." *Journal of occupational and environmental medicine* 43.7 (2001): 616-622.
- Roelofs, Cora R., et al. "Prevention strategies in industrial hygiene: a critical literature review." *AIHA journal* 64.1 (2003): 62-67.
- <https://www.cdc.gov/niosh/topics/hierarchy/default.html>

-
- 8 Context for Implementation: 1 Inner setting

- Design an implementation strategy that reflects a given organizational context and optimizes organizational readiness for effective implementation.

Suggested reading

- Weiner, B. J., M. A. Lewis, et al. (2008). "Using organization theory to understand the determinants of effective implementation of worksite health promotion programs." *Health Education Research* 24(2): 292-305.
- Weiner, B. J. (2009). "A theory of organizational readiness for change." *Implementation Science* 4(67): 1-9.

-
- 9 Contexts for Implementation 2: Outer setting (broader context of intervention, including socio-political; cultural; systems thinking; domestic and global infrastructure; comparative health systems)

Suggested readings

- Hawe, P., Shiell, A. & Riley, T. *Am J Community Psychol* (2009) 43: 267. <https://doi.org/10.1007/s10464-009-9229-9>
- Rutter H, Savona N, Glonti K, Bibby J, Cummins S, Finegood DT, Greaves F, Harper L, Hawe P, Moore L, Petticrew M, Rehfuess E, Shiell A, Thomas J, White M. The need for a complex systems model of evidence for public health. *Lancet*. 2017 Dec 9;390(10112):2602-2604. doi: 10.1016/S0140-6736(17)31267-9. Epub 2017 Jun 13. PubMed PMID: 28622953.

10 Models of Intervention Delivery (in healthcare, community-based organizations and public health; development and training; intervention sustainability)

Suggested readings

- Proctor, E et al. "Implementation strategies: recommendations for specifying and reporting" Implementation Science 2013, 8:139.
- McCarthy et al, "Training and HIV-Treatment Scale-Up: Establishing an Implementation Research Agenda"
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1483909/>
- International Training and Education Center for Health (I-TECH), Training Evaluation Framework and Tools: <https://www.go2itech.org/resources/training-evaluation-framework-and-tools-teft/>

11 Communication for Optimizing Implementation: Risk communication, Engagement of Stakeholders, Marketing of Interventions

Suggested reading

- Grier S, Bryant CA. Social marketing in public health. Annu Rev Public Health. 2005;26:319-39. Review. PubMed PMID: 15760292.

12 Implementing Interventions with Improvement and Learning in Mind

Suggested readings

- Batalden & Davidoff (2007) What is "quality improvement" and how can it transform healthcare?
- Perla (2010) The run chart: a simple analytical tool for learning from variation in healthcare processes
- TwumDanso (2012) A nationwide quality improvement project to accelerate Ghana's progress toward Millennium Development Goal Four: design and implementation progress.
- Sherr (2014) Systems analysis and improvement to optimize pMTCT (SAIA): a cluster randomized trial.

Assessment: Milestone assignment due on implementation plan

13 Monitoring Implementation

Suggested readings

- <https://www.bttop.org/sites/default/files/public/W.K.%20Kellogg%20LogicModel.pdf>
- <https://www.samhsa.gov/capt/sites/default/files/resources/developing-logic-model-guide.pdf>

14 Budget, Identify, Plan, Allocate, Monitor, and Report Resources

Suggested reading

- Project Management for Development Professionals Guide:
<https://www.pm4ngos.org/pmd-pro/#pmdpro>

Assessment: End of Module 2 Quiz

MODULE 3: Evaluate and Disseminate Interventions (2 credits)

15 Process vs. Outcome Evaluation and Process Evaluation Methods

Suggested reading

- Saunders, R. P., Evans, M. H., & Joshi, P. (2005). Developing a Process-Evaluation Plan for Assessing Health Promotion Program Implementation: A How-To Guide. *Health Promotion Practice*, 6(2), 134–147. <https://doi.org/10.1177/1524839904273387>
-

16 Outcome Evaluation Methods

Suggested reading

- Brownson RC, Baker EA, Leet TL, et al. Evaluating the program or policy (Chapter 10). In *Evidence-based Public Health*. Oxford University Press, 2010.
-

17 Cost and Cost Effectiveness (the intervention works but can we afford it?)

Suggested reading

- Weatherly H, Drummond M, Claxton K, Cookson R, Ferguson B, Godfrey C, Rice N, Sculpher M, Sowden A. Methods for assessing the cost-effectiveness of public health interventions: key challenges and recommendations. *Health Policy*. 2009 Dec;93(2-3):85-92. doi: 10.1016/j.healthpol.2009.07.012. Epub 2009 Aug 25. Review. PubMed PMID: 19709773.

Milestone assignment due on evaluation plan

18 Evaluation, Communication, and Use of Interventions to Inform Action

Suggested reading

- Haines A, Kuruvilla S, Borchert M. Bridging the implementation gap between knowledge and action for health. *Bull World Health Organ*. 2004 Oct;82(10):724-31; discussion 732. Review. PubMed PMID: 15643791; PubMed Central PMCID: PMC2623035.
-

19 Scale-up, Dissemination, and Sustainability of interventions

Suggested reading

- Steensma JT, Kreuter MW, Casey CM, Bernhardt JM. Enhancing dissemination through marketing and distribution systems: a vision for public health. Brownson RC, Colditz GA, Proctor EK (eds). Dissemination and Implementation Research in Health: Translating Science to Practice. 2nd Edition. New York: Oxford University Press; 2018.

Assessment: End of Module 3 Quiz

20 Group Poster Session

Assessment: Poster Session

Assessment: Final Proposal Due

Classroom Climate

We Are a Learning Community. The development of a supportive learning environment is fundamental to this course. As a learner-centered classroom, we all have wisdom and experience to share. Students and instructors are expected to share their knowledge, comments, critiques, feedback, and alternate opinions. Our learning space is the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. The co-creation of this respectful environment will be fostered by listening to views other than your own with an open mind, being able to understand and appreciate another person's point of view, and the ability to articulate your own point of view using direct, respectful communication. Being conscious of not monopolizing dialogue and/or interrupting will help create this environment as well.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it. It will enrich others.
- My students' and colleagues' viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Ask questions when I don't understand something.
- Surface my feelings in such a way that can make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

Victoria Gardner, Assistant Dean of Diversity, Equity, and Inclusion, vg@uw.edu, is a resource for students with classroom climate concerns. Please also review the School of Public Health's [Student Concern Policy](#) for further guidance on addressing student concerns.

Course Policies

- Materials for this course will be provided on the Canvas web site. Students are expected to check the site frequently to keep up to date with the content and assignments.
- Please refrain from cell phone or other personal contact usage (email, text, etc.) during class time.
- Class preparation and participation are very important for success in this course. Please arrive on time and attend the entire class time. Instructors need to be notified in advance of any absence.
- It is the student's responsibility to obtain class materials if and when they are absent. Missing class does not excuse late assignments. Please contact the instructor(s) to request approval and for information on making up exams, homework, etc. It is at the discretion of the instructor to grant approval.
- The School of Public Health holds its faculty, staff, and students to the highest standards of professional conduct. In this class, it is expected that we will all:
 - Listen carefully and respectfully, and not talk over one another
 - Share and teach each other generously
 - Clarify the intent and impact of our comments
 - Give and receive feedback in a relationship-building manner
 - Work together to expand our knowledge by using high standards for evidence and analysis

Course Expectations

Students will learn best if they regularly complete their homework assignments on time, and actively participate during presentations, in classroom discussions, and in their small group work. In general, students who actively participate will do better in this class, both in terms of achieving the learning goals and in terms of their final grade. Given the interactive nature, we expect students to attend all or most classes in person. We do expect that students contribute to the group project while also allowing others to contribute. We also expect students present only their own work as theirs, and properly cite all intellectual content of others. We are confident all students who come prepared to class and engage with each other and the course material will be successful at achieving the course learning objectives.

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with [Disability Resources for Students](#) (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206.543.8924 or uwdrs@uw.edu or disability.uw.edu.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the [UW Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [UW Community Standards and Student Conduct](#) web site.

Writing Skills Information

Writing is an important transferable skill and is important for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. Therefore, this course includes several written assignments with the goal to help you identify areas of strength and improvement in your writing. However, if you feel you could benefit from additional opportunities to improve these skills, I have included below a list of resources at the UW and others accessible online.

UW Resources:

- Odegaard Writing and Research Center (<http://depts.washington.edu/owrc/>)
- OWRC English language support (<http://depts.washington.edu/owrc/english-language-support>)
- UW Libraries: Campus Writing Resources (<https://guides.lib.uw.edu/research/writing-resources>)
- UW Speaking Center (<http://www.com.washington.edu/speaking-center/>)
- CLUE late night writing center (<http://webster.uaa.washington.edu/asp/website/clue/writing-center/>)
- UW International and English Language Programs (<https://www.ielp.uw.edu/>)
- Foundation for International Understanding through Students (FIUTS) (<http://www.fiuts.washington.edu/>)
- Language Learning Center (<https://depts.washington.edu/llc/>)
- Center for Teaching and Learning website, "Academic support for international and multilingual students" (<http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/>)

Online Resources:

- Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)
- The Purdue Online Writing Lab: "ESL Students" (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)
- "Advice on Academic Writing" (University of Toronto) (<http://advice.writing.utoronto.ca/>)
- "Advice on Academic Writing: Using Sources" (http://advice.writing.utoronto.ca/using_sources/)
- "Online resources for writers" (Amherst) (<https://www.amherst.edu/academiclife/support/writingcenter/resourcesforwriters>)
- University of North Carolina Writing Center, "Tips and Tools" (<https://writingcenter.unc.edu/tips-and-tools/>); "Editing and Proofreading" (<https://writingcenter.unc.edu/tips-and-tools/editing-and-proofreading/>)

Appendix 7. Syllabus—PHI 516, Public Health Practice

Spring 2021, 3 credits

Instructor: TBD

Time: (2x/week @ 1.5 hours)

Phone: TBD

Email: TBD

Location: TBD

Office: TBD

Office Hours: TBD

Canvas URL: TBD

Teaching Assistants: TBD

Phone: TBD

Email: TBD

Office: TBD

Office Hours: TBD

Course Prerequisites

- PHI 511—Foundations of Public Health (Autumn)
- PHI 512—Analytic Skills for Public Health (Autumn)
- PHI 513—Analytic Skills for Public Health II (Winter)
- PHI 514—Determinants of Health (Winter)

Course Description

PHI 516: Public Health Practice is the culminating course of the common MPH core curriculum, designed to integrate and apply knowledge of health determinants and public health systems, analytic skills and evidence-based approaches to real world public health problem solving. This course will develop system thinking skills and an understanding of the interrelationships between public health infrastructure, generation and evaluation of public health evidence, public health policy, leadership, management, communication and community engagement. Students will work in teams to apply their knowledge and skills in these areas to public health practice-based challenges using a case study framework.

Course Learning Objectives

After successfully completing this course, students will be able to:

1. Describe various leadership styles and explain how they influence approaches to problem solving and system functioning.
2. Describe public health organizational dynamics, and explain their influence on the work of public health.
3. Interpret surveillance data to assess community health status and develop a community health improvement plan.
4. Identify and apply community-engagement and advocacy strategies to public health problems and activities.
5. Recommend and apply prevention and control strategies in response to a public health problem.
6. Communicate effectively with various public health stakeholders.
7. Recommend public health program and/or policy evaluation strategies.

Textbooks & Readings

Example readings include:

Module 1: Leadership and Management

- Petrie, N. *Future Trends in Leadership Development*. Center for Creative Leadership. November 2011. <http://law.scu.edu/wp-content/uploads/leadership/Future-Trends-in-Leadership-Development.pdf>
- Patterson K. *Crucial Conversations: Tools for Talking When Stakes are High*. McGraw-Hill. 2002.
- Edmondson A. *The Three Pillars of a Teaming Culture*. Harvard Business Review. 2013
- Heath C. *Switch: How to Change Things When Change Is Hard*. Crown Business. 2010.

Module 2: Community Health Assessment

- Brownson R, Fielding J, Maylahn C. Evidence-based public health: a fundamental concept for public health practice. *Annu Rev Public Health*. 2009;30:175-201.
- Thacker SB. *Historical Development* from Principles and Practices of Public Health Surveillance. Oxford University Press. 2010.
- Community Health Assessment and Improvement Planning Toolkit. National Association of City and County Health Officials. <https://www.naccho.org/programs/public-health-infrastructure/performance-improvement/community-health-assessment>

Module 3: Case Studies

- Levy B, Gaufrin J. *Mastering Public Health: Essential Skills for Effective Practice*. Oxford University Press. 2011.
- Case study-specific readings will vary by case study topic.

Learning Assessments & Grading

Students in PHI 516 will work in teams to apply knowledge gained over the course of the foundational MPH curriculum and new skills gained in PHI 516 to tackle challenges in public health practice using a case study framework. Students will be asked to present their findings and recommendations in writing and orally.

Final grades will be calculated as follows:

| Assessment Item | Grade Percentage |
|---|-------------------------|
| Quizzes | 20% |
| Class participation | 10% |
| Written case study responses | 20% |
| Public health program/policy development proposal | 30% |
| Oral presentation to mock Board of Health | 20% |

Course Outline

Although the Modules page on the Canvas course site should be used to organize all course materials by session, week, and/or module, the syllabus should include a high-level outline of the sequencing of topics and major course milestones such as in-class activities and due dates for major assignments, quizzes and exams.

Case Studies

Students will be assigned to groups to work through real and timely challenges in public health practice. Student groups will be assigned a case study topic and will complete the following activities:

1. Establish team norms, processes and roles.
2. Gather, analyze and interpret available data and information (as needed) on the public health problem, including community demographics, policies and infrastructure, evidence-based approaches and available resources.
3. Propose an approach to managing the public health problem. Prepare written and oral presentations to argue the value of a proposed approach (including recommendations for additional data collection and analysis, intervention or policy development or implementation, resources needed, evaluation plan).
4. Present proposal to a mock board of health at the end of the quarter.

Example case study topics include:

1. Contaminated water crisis in a resource limited setting
2. Pandemic influenza preparedness and response
3. Managing an opioid epidemic
4. Investigating a cluster of rare infant birth defects
5. Working to improve access to traditional and healthy foods among Native American communities
6. Managing a measles outbreak

| Session | Topic Covered Activities/Assessments/Assignments |
|--|---|
| MODULE 1: <i>Leadership and Management</i> | |
| 1 | Framing: Leading in public health; identifying challenges |
| 2 | Leading self: Vertical development and development strategies; Emotional intelligence |
| 3 | Group dynamics: Dialogue skills part 1 |
| 4 | Group dynamics: Dialogue skills part 2; creating psychological safety |
| 5 | Leading teams: Teaming strategies and principles; Facilitation skills |
| 6 | Leading change: Change management models |
| 7 | Creating a culture of creativity: creative confidence; mobilizing others |
| 8 | Summary; Group presentations |
| MODULE 2: <i>Community Health Assessment and Improvement Partnerships</i> | |
| 9 | Health needs assessments |
| 10 | Public health surveillance |
| 11 | Developing and implementing public health programs/policies |
| 12 | Program monitoring and evaluation |

MODULE 3: *Public Health Case Studies: Where the rubber meets the road*

| | |
|----|--|
| 13 | Working with policy makers |
| 14 | Public health advocacy |
| 15 | Communication strategies: identifying and understanding stakeholders |
| 16 | Community engagement |
| 17 | Communication strategies: honing the message |
| 18 | Working with media (print, radio, TV, social) |
| 19 | Student presentations (mock Board of Health) |
| 20 | Student presentations (mock Board of Health) |

Classroom Climate

We Are a Learning Community. The development of a supportive learning environment is fundamental to this course. As a learner-centered classroom, we all have wisdom and experience to share. Students and instructors are expected to share their knowledge, comments, critiques, feedback, and alternate opinions. Our learning space is the mutual responsibility of the instructors and the students; as such, we have a responsibility to engage in dialogue in a way that supports learning for all of us. The co-creation of this respectful environment will be fostered by listening to views other than your own with an open mind, being able to understand and appreciate another person's point of view, and the ability to articulate your own point of view using direct, respectful communication. Being conscious of not monopolizing dialogue and/or interrupting will help create this environment as well.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Here are some practices we as learning community members can strive to use in our learning process:

- My own viewpoint is important—share it. It will enrich others.
- My students' and colleagues' viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others' views while inviting them to inquire into mine.
- Ask questions when I don't understand something.
- Surface my feelings in such a way that can make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others.

Victoria Gardner, Assistant Dean of Diversity, Equity, and Inclusion, vg@uw.edu, is a resource for students with classroom climate concerns. Please also review the School of Public Health's [Student Concern Policy](#) for further guidance on addressing student concerns.

Course Policies

- Materials for this course will be provided on the Canvas web site. Students are expected to check the site frequently to keep up to date with the content and assignments.
- Please refrain from cell phone or other personal contact usage (email, text, etc.) during class time.
- Class preparation and participation are very important for success in this course. Please arrive on time and attend the entire class time. Instructors need to be notified in advance of any absence.
- It is the student's responsibility to obtain class materials if and when they are absent. Missing class does not excuse late assignments. Please contact the instructor(s) to request approval and for information on making up exams, homework, etc. It is at the discretion of the instructor to grant approval.
- The School of Public Health holds its faculty, staff, and students to the highest standards of professional conduct. In this class, it is expected that we will all:
 - Listen carefully and respectfully, and not talk over one another
 - Share and teach each other generously
 - Clarify the intent and impact of our comments
 - Give and receive feedback in a relationship-building manner
 - Work together to expand our knowledge by using high standards for evidence and analysis

Course Expectations

Students will learn best if they regularly complete their homework assignments on time, and actively participate during presentations, in classroom discussions, and in their small group work. In general, students who actively participate will do better in this class, both in terms of achieving the learning goals and in terms of their final grade. Given the interactive nature, we expect students to attend all or most classes in person. We do expect that students contribute to the group project while also allowing others to contribute. We also expect students present only their own work as theirs, and properly cite all intellectual content of others. We are confident all students who come prepared to class and engage with each other and the course material will be successful at achieving the course learning objectives.

Access and Accommodations

Your experience in this class is important to us, and it is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law. If you experience barriers based on a disability or temporary health condition, please seek a meeting with [Disability Resources for Students](#) (DRS) to discuss and address them. If you have already established accommodations with DRS, please communicate your approved accommodations to your instructor at your earliest convenience so we can discuss your needs in this course.

DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations are established through an interactive process between you, your instructor(s) and DRS. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accommodations (this can include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206.543.8924 or uwdrs@uw.edu or disability.uw.edu.

Academic Integrity

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity. The UW School of Public Health (SPH) is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the [UW Student Conduct Code](#) (WAC 478-120). We expect you to know and follow the university's policies on cheating and plagiarism, and the [SPH Academic Integrity Policy](#). Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the [UW Community Standards and Student Conduct](#) web site.

Writing Skills Information

Writing is an important transferable skill and is important for all career pathways. Establishing a strong foundation in writing skills will help you be successful throughout your future course work and career. Therefore, this course includes several written assignments with the goal to help you identify areas of strength and improvement in your writing. However, if you feel you could benefit from additional opportunities to improve these skills, I have included below a list of resources at the UW and others accessible online.

UW Resources:

- Odegaard Writing and Research Center (<http://depts.washington.edu/owrc/>)
- OWRC English language support (<http://depts.washington.edu/owrc/english-language-support>)
- UW Libraries: Campus Writing Resources (<https://guides.lib.uw.edu/research/writing-resources>)
- UW Speaking Center (<http://www.com.washington.edu/speaking-center/>)
- CLUE late night writing center (<http://webster.uaa.washington.edu/asp/website/clue/writing-center/>)
- UW International and English Language Programs (<https://www.ielp.uw.edu/>)
- Foundation for International Understanding through Students (FIUTS) (<http://www.fiuts.washington.edu/>)
- Language Learning Center (<https://depts.washington.edu/lc/>)
- Center for Teaching and Learning website, "Academic support for international and multilingual students" (<http://www.washington.edu/teaching/teaching-resources/inclusive-teaching-at-uw/teaching-im-students/academic-support-for-im-students/>)

Online Resources:

- Purdue Online Writing Lab (OWL) (https://owl.purdue.edu/owl/purdue_owl.html)
- The Purdue Online Writing Lab: "ESL Students" (https://owl.purdue.edu/owl/english_as_a_second_language/esl_students/index.html)
- "Advice on Academic Writing" (University of Toronto) (<http://advice.writing.utoronto.ca/>)
- "Advice on Academic Writing: Using Sources" (http://advice.writing.utoronto.ca/using_sources/)
- "Online resources for writers" (Amherst) (<https://www.amherst.edu/academiclife/support/writingcenter/resourcesforwriters>)
- University of North Carolina Writing Center, "Tips and Tools" (<https://writingcenter.unc.edu/tips-and-tools/>); "Editing and Proofreading" (<https://writingcenter.unc.edu/tips-and-tools/editing-and-proofreading/>)

Appendix 8. Guidelines for Out-of-Class-Time

Per the UW guidelines, “one credit represents an approximate time commitment of 3 hours per week.” The breakdown for the six new Core courses is as follows:

| Course | # of credits | In class time | Out of class time | Weekly total number of hours |
|---------|--------------|---------------|-------------------|------------------------------|
| PHI 511 | 3 | 3 | 6 | 9 |
| PHI 512 | 7 | 7 | 14 | 21 |
| PHI 513 | 3 | 3 | 6 | 9 |
| PHI 514 | 3 | 3 | 6 | 9 |
| PHI 515 | 4 | 4 | 8 | 12 |
| PHI 516 | 3 | 3 | 6 | 9 |

Each syllabus (shown above) well defines the course outline of materials to be covered during the in class time. Additional details re: out of class time for students are included below:

PHI 511—Foundations of Public Health—suggested time allotment for 6 hours outside of class time per week:

- Three hours of pre-class time for readings, research of case studies, quiz preparation, and individual homework/writing assignments
- Three hours of large and small group work, including research of selected group case studies, follow up discussions from in-class exercises, cohort-building exercises, and coordinating written group assignments
- An example of one week’s work is as follows:
 - Prepare for quiz and in-class discussions (based on readings, video, and research)
 - Writing assignment: write a two-page paper on both your viewpoint and personal/observational experience with social class, racism, and privilege in public health systems (in the US or globally, as applicable); prepare to discuss in class and with your group
 - Research case study: find a case study that interests you to present to your group regarding inequities in public health due to institutional racism and/or privilege
 - Group work: review all presented case studies and select one for this week’s group paper (cannot be similar to individual writing assignment); continue assigned cohort-building exercises for this week
 - Readings and video:
 - Jones, Camara P. 2000. “Levels of Racism: A Theoretic Framework and a Gardener's Tale.” *American Journal of Public Health* 90 (8): 1212–1215. doi: 10.2105/AJPH.90.8.1212
 - Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *The Lancet*. 2017 Apr 8;389(10077):1453-63.
 - Harris M, Macinko J, Jimenez G, Mullachery P. Measuring the bias against low-income country research: an Implicit Association Test. *Globalization and health*. 2017 Dec;13(1):80.

- Van Herk KA, Smith D, Andrew C. Examining our privileges and oppressions: incorporating an intersectionality paradigm into nursing. *Nursing Inquiry*. 2011 Mar;18(1):29-39.
- Watch: Ted Talk video of Mary Jones re: Allegories on race and racism (<https://www.youtube.com/watch?v=GNhcY6fTyBM>)
- Seattle & King County Racial Equity Toolkit to Assess Policies, Initiatives, Programs, and Budget Issues, https://www.seattle.gov/Documents/Departments/RSJI/RacialEquityToolkit_FINAL_August2012.pdf

PHI 512—Analytic Skills for Public Health I—suggested time allotment for 14 hours outside of class time per week:

- Readings: 2 hours
- Weekly online quiz: 1 hour
- Homework/Project work: 11 hours
- An example of one week’s work is as follows:
 - Read chapter 3 of Merrill (“Standardizing rates”)
 - Complete the online quiz in Canvas by 11:59pm Sunday night
 - Complete homework set 3 and submit on canvas by 5pm on Friday

PHI 513—Analytic Skills for Public Health II—suggested time allotment for 6 hours outside of class time per week:

- Readings: 2 hours
- Weekly online quiz: 1 hour
- Homework/Project work: 3 hour
- An example of one week’s work is as follows:
 - Complete the online quiz in Canvas by 11:59pm Sunday night
 - Complete homework set 10 and submit on canvas by 5pm on Friday
 - Read the following:
 - Brown CH, et al. An Overview of Research and Evaluation Designs for Dissemination and Implementation. *Annu Rev Public Health*. 2017.
 - Hemming K, et al. How to design efficient cluster randomised trials. *BMJ*. 2017.

PHI 514—Public Health Determinants—suggested time allotment for 6 hours outside of class time per week:

- 3 hours per week pre-class reading preparation
- 3 hours per week post-class homework and project work
- An example of one week’s work is as follows:
 - 3 hours of work on written paper assignment
 - Readings:
 - Nweke OC, Sanders III WH. Modern environmental health hazards: a public health issue of increasing significance in Africa. *Environmental Health Perspectives*. 2009 Jun;117(6):863.

- Jokela M. Are neighborhood health associations causal? A 10-year prospective cohort study with repeated measurements. *American journal of epidemiology*. 2014 Sep 26;180(8):776-84.
- Curl CL, Fenske RA, Elgethun K. Organophosphorus pesticide exposure of urban and suburban preschool children with organic and conventional diets. *Environmental health perspectives*. 2003 Mar;111(3):377.
- Selected readings from Frumkin, *Environmental Health: From Global to Local*, including chapters on Toxicology, Exposure Assessment, and Water and Health.

PHI 515—Implementing Public Health Interventions—suggested time allotment for 8 hours outside of class time per week:

- Four hours of pre-class preparations, including reading and synthesizing peer-reviewed literature, case study examples, news articles and other website materials; viewing short videos; completing pre-class quizzes, and studying for in-class quizzes
- Four hours expected for writing assignments, review of discussion materials, review of class notes, use of study guides to prepare for exams, and project work with assigned small groups involving collection and evaluation of case examples and interviews with public health professionals, as appropriate
- An example of one week’s work is as follows:
 - Complete the following readings:
 - Annie E Casey Foundation, “Theory of Change: A Practical Tool for Action, Results, and Learning” (<https://www.aecf.org/resources/theory-of-change/>)
 - RAND Corporation and University of South Carolina. Getting to Outcomes. Available at: <http://www.rand.org/health/projects/getting-to-outcomes.html>
 - Renger R, Titcomb A. A three-step model to teaching logic model. *American Journal of Evaluation*. 2002;23(4):493-503.
 - Pre-class prep viewing short video re: developing SMART objectives, review class notes, prepare for in-class discussion, and quiz preparation
 - Writing assignment re: logic models, theory of change, and designing interventions, and preparing for outline of intervention due at end of module
 - Small group work includes preparing slides for a case example presentation and working toward end of course final presentations

PHI 516—Public Health Practice—suggested time allotment for 6 hours outside of class time per week:

- Readings: 2 hours
- Case study preparation: 4 hours
- An example of one week’s work is as follows:
 - Read Chapter 1: *Communication with the Public* and Chapter 2: *Persuading Others: How to Advocate* from Levy B, Gaufin J. *Mastering Public Health: Essential Skills for Effective Practice*. Oxford University Press. 2011 (2 hours)
 - Team meetings and individual work to gather available data and information on assigned case study topic (including community demographics, policies and infrastructure, evidence-based approaches and available resources) (4 hours)

Appendix 9. Memo to Curriculum and Education Policy Committee

To Curriculum and Education Policy Committee (CEPC)
 From Carey Farquhar, MD, MPH
 Chair, MPH Re-Envisioning Steering Committee
 Date March 18, 2019
 Subject New MPH Common Core Syllabi—Request for approval of new courses

Dear CEPC,

The MPH Re-Envisioning Steering Committee is pleased to submit the proposed course syllabi for the new MPH Core courses. The MPH Core courses are designed to provide all MPH graduates with analytic skills and practical competencies necessary to be productive, effective, and transformational public health leaders, scientists, and practitioners. They will also provide skills and knowledge competencies that will meet MPH accreditation requirements from the Council on Education in Public Health (CEPH). These data are detailed below.

The six courses are as follows:

| <i>Quarter</i> | <i>Number*</i> | <i>Title</i> | <i>Credits</i> | <i>Per Quarter</i> |
|----------------|----------------|--|--------------------------|--------------------|
| Autumn | PHI 511 | Foundations of Public Health | 3 | 10 |
| | PHI 512 | Analytic Skills for Public Health I | 7 | |
| Winter | PHI 513 | Analytic Skills for Public Health II | 3 | 6 |
| | PHI 514 | Determinants of Health | 3 | |
| Spring | PHI 515 | Implementing Public Health Interventions | 4 | 7 |
| | PHI 516 | Public Health Practice | 3 | |
| | | | <i>Total: 23 credits</i> | |

*Note PHI 512 and PHI 513 were previously called PHI 512 A and PHI 512 B because they are two parts of a sequence. The change to PHI 512 and PHI 513 was made when we learned that we cannot use A and B to designate distinct courses in different quarters.

We anticipate all incoming MPH degree students will be required to take these courses, which amount to a total of 23 credits over three quarters. The Steering Committee acknowledges all the concerns raised regarding the number of credits proposed for the Core courses; however, after careful review of the content covered by each course, we found that we were not able to reduce required in class and out of class instructional hours without compromising the quality of the courses. The all-day retreat in late January that was held for Steering Committee members, and faculty and student members of each of the course work groups, was extremely valuable in identifying and correcting for any overlap or gaps in content across the core courses. Please see Appendix I entitled, 'Out of Class Hours' where we justify the number of hours for each course.

Input Received and Incorporated

The Steering Committee has appreciated all the time, effort, energy, and excitement in putting these new courses together. Input has been received from faculty, staff, students, alumni, and the practice community. Since last July, over 60 emails have been received into the mphinput@uw.edu email box (monitored by the Re-Envisioning project manager). We have had excellent feedback since our first communication to faculty, staff, students, and alumni in November and from subsequent internal emails in early February that provided an overview of the new courses. Excellent input has also been received since the draft syllabi were sent on March 5 to CEPC, the SPH Leadership Team, Faculty Council, and the departmental curriculum committees. Finally, we conducted four in-person “Open House Sessions” (two in November and two in February) and were pleased to see more than 100 faculty, staff, and students attend and provide input on the content of these new courses.

The course leads for each syllabus are members of the Steering Committee and they have been reading and discussing general input, as well as input relevant to their specific course, throughout the syllabi preparation period. In addition to incorporating input into the syllabi, they have been identifying input that we will share with course developers once they are selected.

Some feedback we have heard from faculty, staff, and students is that the syllabi do not include details on which specific domains and topics will be covered. The Committee has made every effort to incorporate perspectives from all departments and programs and is committed to doing this as course materials are developed. We envision that case studies, readings, and assignments will present these different topic areas (e.g., genetics, nutrition, One Health) and will provide guidance to course developers to ensure this happens.

We have also been reaching out to the practice community. Members of the community were invited to our all-day retreat on January 22, we held a webinar with around 25 members of the practice community on February 26, and we recently sent the draft syllabi to an advisory group of practice community members for their input as well.

Remarks on Course Development

The Steering Committee is currently having discussions with faculty in the Department of Epidemiology regarding how students will transition from PHI 512 to EPI 513—Epidemiologic Methods II. There are questions about whether students going on to EPI 513 will have the knowledge and skills necessary for the course and the Committee is working hard to provide students what is needed. Our goal is and has always been to create a curriculum that allows students to transition smoothly from PHI 512 to EPI 513 if they desire additional epidemiology training.

The first “official” meeting to begin these discussions will be taking place tomorrow, March 19, and will include myself, Brandon Guthrie (Epidemiology and Steering Committee member), Jim Hughes (Biostatistics and Steering Committee member), Ali Rowhani (Epidemiology), Erin Morgan (Epidemiology and Steering Committee Student Representative), Amanda Phipps (Epidemiology and PHI 512 working group member), and Noel Weiss (Epidemiology).

The transition from PHI 512 to BIOST 512 will be possible because PHI 512 provides content equivalent to BIOST 511—Medical Biometry I. We are still investigating a mechanism that would allow students to go on to BIOST 518—Applied Biostatistics II. A meeting with relevant faculty is being planned and will occur in the near future.

Additional Information for Course Developers

In addition to the syllabi submitted today, MPH Steering Committee members are completing documents to help guide course developers to further enhance course materials and refine the teaching approach. These documents include additional notes such as guest speaker suggestions, learning objectives for course sub-sections, and examples of case studies that may be used, as well as feedback/suggestions received from faculty, staff, students, alumni, and the practice community.

Once faculty are assigned for each course, it is the recommendation of the Steering Committee that each course working group meet with these faculty to review the syllabus, the guide, and discuss in more detail teaching methods and materials. We envision that all Core course instructors will come together and meet regularly as they develop and teach courses to avoid overlap and gaps in the curriculum.

MPH Re-Envisioning Steering Committee

| | |
|-------------------|--|
| Carey Farquhar | Global Health (Committee Chair) |
| Janet Baseman | Dean's Office, Public Health Practice |
| Shirley Beresford | Dean's Office, Senior Associate Dean, Academic Affairs |
| Victoria Gardner | Dean's Office, Equity, Diversity, and Inclusion |
| Brandon Guthrie | Epidemiology |
| Jeff Hodson | Dean's Office, Communications |
| James Hughes | Biostatistics |
| Scott Meschke | Environmental and Occupational Health Sciences (EOHS) |
| Donald Patrick | Health Services |
| Gracious Garniao | Health Services, Student Representative |
| Alex Kossik | EOHS, Student Representative |
| Erin Morgan | Epidemiology, Student Representative |
| Divya Pahwa | Nutrition, Student Representative |
| Shadae Paul | Global Health, Student Representative |
| Kimberly Hay | Dean's Office, Project Manager |

Appendix 10. Boot Camp Agenda

This draft boot camp outline is based on a similar boot camp from 2018. In future offerings, it may be preferable to devote more time to R and less to the math review, per student feedback.

Day 1—8:00-12:00 pm

| | |
|---|---|
| Lecture 0 Overview and Skills for Success 45 min | <ul style="list-style-type: none">• Introduction to the workshop, EPI/BIOST courses• Some skills for success in graduate school |
| Lecture 1 Order of operations and negative numbers 35 min | <ul style="list-style-type: none">• Teaser trailer: word problems<ul style="list-style-type: none">○ Example: kidney stones○ Example: statistics in medical research• Order of operations• Negative numbers• Absolute value |
| Lecture 2 Fractions, Percentages, and Decimals 60 min | <ul style="list-style-type: none">• Introducing proportions• Fractions• Other ways to represent proportions• Proportions and other mathematical constructs in epidemiology |
| Lecture 3 Algebra 75 min | <ul style="list-style-type: none">• Solving for an unknown quantity• Variables• Weighted averages• Cross-tabulation |
| Extra practice Khan Academy offers interactive online units for most of the topics covered today. (It may ask for a donation, but this not required.) For each unit, you can take a quiz to check if you need more practice in a particular area. If so, it will direct you to areas of the site where you can review and practice those skills. | |
| <ul style="list-style-type: none">• Order of operations• Negative numbers• Fractions• Decimals | <ul style="list-style-type: none">• Relationship of fractions, decimals and percentages• Algebra foundations (variables and substitution)• Functions |

Day 2—8:00-12:00 pm

| | |
|--|--|
| Lecture 4 Graphs 50 min | <ul style="list-style-type: none">• Slope-intercept and point slope form• Drawing graphs based on an equation for a line• Determining the equation from a graph• Transformations: shifting and stretching |
| Lecture 5 Logarithms and Exponents 40 min | <ul style="list-style-type: none">• Why transform our data?• Exponentiation• Logarithms• Example: gender bias in salaries |
| Lecture 6 Word Problems 45 min | <ul style="list-style-type: none">• Using units• Steps for solving word problems• Example• Exercises |
| Extra Practice | |
| <ul style="list-style-type: none">• Logarithms and exponents• Ratio and rate word problems• Graphs | <ul style="list-style-type: none">• Transforming functions:<ul style="list-style-type: none">◦ Stretching◦ Shrinking |

Day 3—8:00-12:00 pm

| | |
|--|---|
| Lecture 7 20 min (much live demo) | <ul style="list-style-type: none">• Installing R and Rstudio |
| 10 minute break | |
| Lecture 8 R and RStudio basics 120 min (much live demo, with breaks) | <ul style="list-style-type: none">• R interface• RStudio interface• R scripts• Intro to R programming<ul style="list-style-type: none">◦ Functions◦ Objects◦ Loading/saving data◦ Manipulating data (indexing, subsetting)• R packages |
| 10 minute break | |
| Lecture 9 Accessing help 40 min (much live demo) | <ul style="list-style-type: none">• Help files within R/on CRAN• Help on the web |
| Recommended Reading/Browsing | |
| R | <ul style="list-style-type: none">• Lecture notes on data types and data structures (from 2016)• Hadley Wickham's book |
| Reproducible Research | <ul style="list-style-type: none">• Christopher Gandrud, Reproducible Research with R and Rstudio, (2015)• Hadley Wickham, R Packages (2015)• Yihui Xie, Dynamic Documents with R and knitr, (2015)• Karl Broman's Tools for RR Course |

Appendix 11. Cross-Cutting Themes Chart

| Cross-Cutting Theme | | PHI 511 | PHI 512 | PHI 513 | PHI 514 | PHI 515 | PHI 516 |
|---------------------|----------------------------------|--|---|---|---|--|--|
| Ethics | Incorporated into course by ... | <ul style="list-style-type: none"> ◆ Individual vs. population health and rights | <ul style="list-style-type: none"> ◆ Data integrity ◆ Scientific rigor ◆ P-hacking | <ul style="list-style-type: none"> ◆ Ethical responsibilities of data collection | <ul style="list-style-type: none"> ◆ Ethical decision making in population health | <ul style="list-style-type: none"> ◆ Design of stakeholder-centered interventions | <ul style="list-style-type: none"> ◆ Description of practice ethics (vs research) |
| | Students will learn/apply by ... | <ul style="list-style-type: none"> ◆ Case study assignment | <ul style="list-style-type: none"> ◆ Lectures ◆ Homework ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Case study ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Small group assignments | <ul style="list-style-type: none"> ◆ Quiz ◆ Class project paper | <ul style="list-style-type: none"> ◆ Lecture and surveillance assignment |
| Equity | Incorporated into course by ... | <ul style="list-style-type: none"> ◆ Disparities in healthcare delivery | <ul style="list-style-type: none"> ◆ Subgroup analysis ◆ Variable definition | <ul style="list-style-type: none"> ◆ Understanding needs of sub-populations ◆ Cultural humility when working with diverse populations | <ul style="list-style-type: none"> ◆ Large scale social determinants of health, including structural racism and bias | <ul style="list-style-type: none"> ◆ Disparities in intervention reach and implementation | <ul style="list-style-type: none"> ◆ Approaches and challenges to equity included in all aspects of practice work (e.g., communication, information access, surveillance, advocacy) |
| | Students will learn/apply by ... | <ul style="list-style-type: none"> ◆ Small group work ◆ Writing exercise | <ul style="list-style-type: none"> ◆ Lectures ◆ Homework ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Case studies ◆ Qualitative data exercises | <ul style="list-style-type: none"> ◆ Lectures ◆ Case studies ◆ Writing exercise | <ul style="list-style-type: none"> ◆ Class project paper | <ul style="list-style-type: none"> ◆ Case studies |
| Evidence to Action | Incorporated into course by ... | <ul style="list-style-type: none"> ◆ Pragmatic challenges | <ul style="list-style-type: none"> ◆ Scientific method ◆ Causal Inference | <ul style="list-style-type: none"> ◆ Application of mixed methods to inform intervention/program design | <ul style="list-style-type: none"> ◆ Evaluation and use of evidence related to determinants of health | <ul style="list-style-type: none"> ◆ Use of evidence in intervention planning, and policy development | <ul style="list-style-type: none"> ◆ Evidence-based public health practice |
| | Students will learn/apply by ... | <ul style="list-style-type: none"> ◆ Case study assignment | <ul style="list-style-type: none"> ◆ Lectures ◆ Homework ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Case studies ◆ Qualitative data exercises | <ul style="list-style-type: none"> ◆ Lectures ◆ Applications to case studies | <ul style="list-style-type: none"> ◆ Quiz ◆ Class project | <ul style="list-style-type: none"> ◆ Lectures ◆ Applications to case studies |

| Cross-Cutting Theme | | PHI 511 | PHI 512 | PHI 513 | PHI 514 | PHI 515 | PHI 516 |
|---------------------|----------------------------------|--|---|--|--|--|---|
| Leadership | Incorporated into course by ... | ♦ Principles of working in teams | ♦ Effective team building | ♦ Team coordination and shared decision making | ♦ Managing team dynamics | ♦ Partnerships in intervention and policy planning | ♦ Public health leadership and advocacy |
| | Students will learn/apply by ... | ♦ Team exercises | ♦ Small group work | ♦ Small group work | ♦ Team exercises | ♦ Class project paper | ♦ Lectures ♦ Homework |
| Communication | Incorporated into course by ... | ♦ Interprofessional competency | ♦ Writing scientific abstract ♦ Visualizing data | ♦ Reporting qualitative findings | ♦ Relevant theories and models of health promotion | ♦ Team and individual communication | ♦ Multi-stakeholder communication strategies |
| | Students will learn/apply by ... | ♦ Interprofessional Education (IPE) activity | ♦ Data analysis project ♦ Homework | ♦ Qualitative data exercises ♦ Small group work | ♦ Group presentation | ♦ Project presentation | ♦ Mock board of health ♦ Case studies |
| Collaboration | Incorporated into course by ... | ♦ Bridging healthcare and communities | ♦ Combining Biostat, Epi and qualitative methods | ♦ Combining Biostat, Epi and qualitative methods | ♦ Implementation and diffusion of innovation, community organizing | ♦ Partnerships with stakeholders | ♦ Bridging communities and organizations to improve public health |
| | Students will learn/apply by ... | ♦ Group project | ♦ Small group work | ♦ Small group work | ♦ Lectures ♦ Group project | ♦ Class project | ♦ Case studies |

| Cross-Cutting Theme | | PHI 511 | PHI 512 | PHI 513 | PHI 514 | PHI 515 | PHI 516 |
|-----------------------------------|----------------------------------|---|---|---|--|--|--|
| Systems Thinking, Globally | Incorporated into course by ... | <ul style="list-style-type: none"> ◆ Impact of globalization ◆ Population health resource and constraint settings | <ul style="list-style-type: none"> ◆ Data analysis ◆ Generalizability ◆ Causal inference | <ul style="list-style-type: none"> ◆ Implementation science methods ◆ Efficacy vs effectiveness ◆ Sustainability and impact at scale | <ul style="list-style-type: none"> ◆ Climate change and other planetary health challenges | <ul style="list-style-type: none"> ◆ Interventions and policy in global context | <ul style="list-style-type: none"> ◆ Global public health systems (e.g., MOH, WHO, CDC) |
| | Students will learn/apply by ... | <ul style="list-style-type: none"> ◆ Case study assignment | <ul style="list-style-type: none"> ◆ Lectures ◆ Homework ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Case studies ◆ Quizzes | <ul style="list-style-type: none"> ◆ Case study assignment (globally-related) ◆ Homework | <ul style="list-style-type: none"> ◆ Class project paper | <ul style="list-style-type: none"> ◆ International case study examples |
| Systems Thinking, Locally | Incorporated into course by ... | <ul style="list-style-type: none"> ◆ Quality and coverage ◆ Resource and constraint settings | <ul style="list-style-type: none"> ◆ Data analysis ◆ Generalizability ◆ Causal inference | <ul style="list-style-type: none"> ◆ Implementation science methods ◆ Efficacy vs effectiveness ◆ Sustainability and impact at scale | <ul style="list-style-type: none"> ◆ Cross-sectional and longitudinal associations between place and health | <ul style="list-style-type: none"> ◆ Interventions and policy in local context | <ul style="list-style-type: none"> ◆ Local public health agency intersections with other aspects of public health systems |
| | Students will learn/apply by ... | <ul style="list-style-type: none"> ◆ Small group work | <ul style="list-style-type: none"> ◆ Lectures ◆ Homework ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Case studies ◆ Quizzes | <ul style="list-style-type: none"> ◆ Lectures ◆ Small group work | <ul style="list-style-type: none"> ◆ Class project paper | <ul style="list-style-type: none"> ◆ Lectures ◆ Readings ◆ Case studies |

Appendix 12. Council on Education in Public Health Competencies Chart

| CEPH Foundational Public Health Knowledge | | | 511 | 512 | 513 | 514 | 515 | 516 |
|--|-------|--|-----|-----|-----|-----|-----|-----|
| <i>Profession and Science of Public Health</i> | D1-1 | Explain public health history, philosophy and values | 2 | | | | | 1 |
| | D1-2 | Identify the core functions of public health and the 10 Essential Services | 1 | | | | 3 | 3 |
| | D1-3 | Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health | | 2 | 2 | | | 1 |
| | D1-4 | List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program | 1 | | | 1 | | 3 |
| | D1-5 | Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc. | 2 | | | 1 | 3 | |
| | D1-6 | Explain the critical importance of evidence in advancing public health knowledge | | 2 | 2 | 2 | 3 | 1 |
| <i>Factors Related to Human Health</i> | D1-7 | Explain effects of environmental factors on a population's health | 1 | | | 2 | | 2 |
| | D1-8 | Explain biological and genetic factors that affect a population's health | 1 | | | 2 | | 2 |
| | D1-9 | Explain behavioral and psychological factors that affect a population's health | 1 | | 1 | 2 | 2 | 2 |
| | D1-10 | Explain the social, political and economic determinants of health and how they contribute to population health and health inequities | 1 | | 1 | 2 | | 2 |
| | D1-11 | Explain how globalization affects global burdens of disease | 1 | | | 2 | | |
| | D1-12 | Explain an ecological perspective on the connections among human health, animal health and ecosystem health (e.g., One Health) | 1 | | | 2 | | |

1 = remember/understand; 2 = apply/analyze/evaluate; 3 = create

Legend based on Bloom's Taxonomy: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

CEPH Foundational Competencies

| | | | 511 | 512 | 513 | 514 | 515 | 516 |
|---|-------|---|------------|------------|------------|------------|------------|------------|
| Evidence-based Approaches to Public Health | D2-1 | Apply epidemiological methods to the breadth of settings and situations in public health practice | | 2* | 2 | | 2 | 1 |
| | D2-2a | Select quantitative data collection methods appropriate for a given public health context | | 2* | 2 | | 3 | 1 |
| | D2-2b | Select qualitative data collection methods appropriate for a given public health context | | | 2* | | 3 | 1 |
| | D2-3a | Analyze quantitative data using biostatistics, informatics, computer-based programming and software, as appropriate | | 2* | 2 | | | |
| | D2-3b | Analyze qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate | | | 2* | | | |
| | D2-4 | Interpret results of data analysis for public health research, policy or practice | | | 2 | 2 | 2* | 3 |
| Public Health and Health Care Systems | D2-5 | Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings | 2* | | | | | 2 |
| | D2-6 | 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 | 2 | | | 2* | | 2 |
| Planning and Management to Promote Health | D2-7 | Assess population needs, assets and capacities that affect communities' health | | | 1 | 2 | 2 | 3* |
| | D2-8 | Apply awareness of cultural values and practices to the design or implementation of public health policies or programs | | | 1 | | 3* | 3 |
| | D2-9 | Design a population-based policy, program, project or intervention | | | 1 | | 3* | 3 |
| | D2-10 | Explain basic principles and tools of budget and resource management | | | | | 3* | 1 |
| | D2-11 | Select methods to evaluate public health programs | | | | | 3* | 2 |

1 = remember/understand; 2 = apply/analyze/evaluate; 3 = create (* = assessment included)

Legend based on Bloom's Taxonomy: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

| CEPH Foundational Competencies | | | 511 | 512 | 513 | 514 | 515 | 516 |
|--|-------|--|------------|------------|------------|------------|------------|------------|
| <i>Policy in Public Health</i> | D2-12 | Discuss multiple dimensions of policy-making process, including the roles of ethics and evidence | 1 | | 1 | 1 | 2* | 3 |
| | D2-13 | Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes | 1 | | | | 2 | 3* |
| | D2-14 | Advocate for political, social or economic policies and programs that will improve health in diverse populations | 1 | | | | 2 | 3* |
| | D2-15 | Evaluate policies for their impact on public health and health equity | | | 1 | 2* | 2 | 2 |
| <i>Leadership</i> | D2-16 | Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making | 1 | | | | | 3* |
| | D2-17 | Apply negotiation and mediation skills to address organizational or community challenges | 1 | | | | | 3* |
| <i>Communication</i> | D2-18 | Select communication strategies for different audiences and sectors | | | 1 | | 2 | 3* |
| | D2-19 | Communicate audience-appropriate public health content, both in writing and through oral presentation | | | 1 | | 3 | 3* |
| | D2-20 | Describe the importance of cultural competence in communicating public health content | | | | | 2 | 3* |
| <i>Interprofessional Practice</i> | D2-21 | Perform effectively on interprofessional teams | 2* | | | | | 2 |
| <i>Systems Thinking</i> | D2-22 | Apply systems thinking tools to a public health issue | | | 1 | 2* | 2 | 3 |

1 = remember/understand; 2 = apply/analyze/evaluate; 3 = create (* = assessment included)

Legend based on Bloom's Taxonomy: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>