

# PRR for Master of Public Health Interdisciplinary Program

**1. Mission, Centrality, and Uniqueness:** To foster interdisciplinary education, scholarly leadership, and public service for community and population health at local, regional, and global levels.

This multi-faceted mission aligns with the three main aspects of Kansas State University’s land-grant mission. As an interdisciplinary graduate program, the MPH program plays roles in instruction, scholarship, student success, and service roles related to public health. The MPH Program mission statement is consistent with that of Kansas State University: <http://www.k-state.edu/about/mission.html>

The MPH Program has four overarching goals that describe how our mission will be accomplished.

Instruction: Provide excellent interdisciplinary education in public health through current/relevant curricula.

Scholarship: Conduct and communicate collaborative research and scholarship in public health.

Service: Partner with and support public health practitioners, to enhance community and population health.

Student Success: Attract, retain and develop future public health leaders in an inclusive, supportive learning environment and build the public health workforce

**2. Strengths, productivity, and qualifications of the Faculty.** MPH Faculty are graduate faculty that have an interest and expertise in one or more fields related to public health. Faculty “apply” to the program to work with MPH students. Their appointments are in one of the colleges at Kansas State University. Below is a list, by college, rank, and department of these faculty (48 or 83% are tenured or in tenure track position).

**Breakdown of MPH Interdisciplinary Graduate Faculty**

College and Rank	#	Departments	Faculty	Emphasis
<b>Agriculture</b>	10	Animal Sciences	6	FSB
(1 Adjunct; 1 Assoc; 4 Asst; 1 Prof; 1 Research Asst)		Entomology	4	IDZ
<b>Architecture (1 Asst)</b>	1	Landscape Architecture	1	All
<b>Arts and Sciences</b>	6	Biology	2	IDZ
(2 Assoc; 1 Asst; 2 Prof; 1 Visiting Asst)	1	Gender, Women and Sexuality Studies	1	All
	1	Journalism	1	All
	1	Math	1	All
	1	Statistics	1	All
<b>Engineering (1 Asst)</b>	1	Industrial Manufacturing Systems Eng	1	All
<b>Health and Human Sciences</b>	16	Food, Nutrition, Dietetics and Health	8	PHN
(4 Assoc; 8 Asst; 4 Prof)		Family Studies and Human Services	4	All
		Kinesiology	4	PHPA
Olathe (1 Research Asst)	1	Olathe	1	IDZ
<b>Veterinary Medicine</b>	21	Anatomy and Physiology	2	IDZ
(6 Assoc; 6 Asst; 1 Clinical Asst; 8 Prof)		Clinical Sciences	3	IDZ
		Diagnostic Medicine	1	FSB
		Diagnostic Medicine	15	IDZ
<b>Total MPH Graduate Faculty</b>	<b>56</b>		<b>56</b>	

The MPH Faculty work are active in research, instruction, and service as outlined on pages 83-102 in our accreditation self-study report here <https://www.k-state.edu/mphealth/pdf/ceph/K-State%20CEPH%20%20final%20self-study%20document%202019.pdf>

**3. Quality of Curriculum and Impact on Students.** The MPH program received its second full national accreditation from the Council on Education for Public Health (CEPH) in 2019, it is accredited through December 31, 2026. This accreditation requires that the MPH curriculum meet all standards outlined by CEPH which includes 39 competencies for each student. A complete list of competencies may be found on the MPH website: [k-state.edu/mphealth](http://k-state.edu/mphealth).

Students admitted to the program meet the graduate school admission requirements and are qualified to enroll in graduate courses. Enrollment trends are shown in the Enrollment/Graduation Matrix below. The program admitted an average of 25 students/year (AY 15 to AY 19). Graduates during the 5 year period were 103, with an

average of 20/year. We maintain or exceed a graduation rate of 70% of all admitted students as required by CEPH. The employment/continued education rates of our students one year after graduation is 90-100%, with a placement rate of 80% prior to graduation in 2019. Students are employed both nationally and internationally, including local and state health departments, the federal government, and private industry.

The MPH program has four emphasis areas. These include: (1) Food Safety and Biosecurity; (2) Infectious Diseases and Zoonoses; (3) Public Health Nutrition and (4) Public Health Physical Activity.

**4. External Demand.** The Bureau of Labor Statistics forecasts career growth between 5-25% nationally and 10.7% in Kansas for public health career areas between 2020 and 2024. National public health workforce groups, the National Consortium for Public Health Workforce Development and the De Beaumont Foundation have called for the development of public health training and academic curricular offerings to prepare public health workers with strategic skills and expertise to meet the growing workforce demand.

**5. Service the graduate program provides to the Disciplines, the University and Beyond, plans to advance the degree program.** The MPH program plans to advance the program offerings including; increasing certificate enrollment with an online certificate option as a strategy to recruit students to the degree, increasing options for BA/BS/MPH concurrent degree, and other dual-degree opportunities. In addition, in a systematic process, the program plans to explore online degree options where possible in line with our current accreditation.

**6. Cost Effectiveness.** Due to the interdisciplinary nature of the degree, it is cost effective. The College of Veterinary Medicine supports the program with a part-time program assistant and a director/associate professor. The program shares resources including courses and qualified graduate faculty with other colleges/departments.

## Section A: Graduate Assessment of Student Learning Report

### A. Program Information

Colleges:	Veterinary Medicine (academic home) plus Ag, HHS, Arch, AS, Engineering, Olathe
Departments:	A&P; AS&I; BIOL; CS; DMP; ENTO; FNDH; FSHS; GWSS; ENTOM; IMSE; JOURN; KIN; LARCP; Math; Olathe; STAT;
Program:	Master of Public Health Interdisciplinary Program
Contact Name	Dr. Ellyn Mulcahy, Program Director; Barta Stevenson, Program Assistant
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Program Assessment Website:	<a href="https://www.k-state.edu/mphealth/about/learning-outcomes/index.html">https://www.k-state.edu/mphealth/about/learning-outcomes/index.html</a>

### B. Outcome Report

#### Student Learning Outcomes (Objectives, Competencies, Emphasis Area Competencies as required by CEPH)

<b>12 Public Health Foundational Objectives</b>
1. Explain public health history, philosophy and values
2. Identify the core functions of public health and the 10 Essential Services
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.
6. Explain the critical importance of evidence in advancing public health knowledge
7. Explain effects of environmental factors on a population's health
8. Explain biological and genetic factors that affect a population's health
9. Explain behavioral and psychological factors that affect a population's health
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities
11. Explain how globalization affects global burdens of disease
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)
<b>22 Public Health Foundational Competencies</b>
1. Apply epidemiological methods to the breadth of settings and situations in public health practice
2. Select quantitative and qualitative data collection methods appropriate for a given public health context
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
4. Interpret results of data analysis for public health research, policy or practice
5. Compare the organization, structure & function of health care, public health & regulatory systems across national & international settings
6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels
7. Assess population needs, assets and capacities that affect communities' health
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs
9. Design a population-based policy, program, project or intervention
10. Explain basic principles and tools of budget and resource management
11. Select methods to evaluate public health programs
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence
13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations
15. Evaluate policies for their impact on public health and health equity
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making
17. Apply negotiation and mediation skills to address organizational or community challenges
18. Select communication strategies for different audiences and sectors
19. Communicate audience-appropriate public health content, both in writing and through oral presentation
20. Describe the importance of cultural competence in communicating public health content
21. Perform effectively on interprofessional teams
22. Apply systems thinking tools to a public health issue
<b>Food Safety and Biosecurity Competencies</b>
Evaluate solutions appropriate for different food safety, biosecurity, and defense issues in the food production continuum.
Examine specific threats to the food system and scientifically investigate how each can be prevented, controlled, and/or mitigated in the food production system.
Differentiate key U.S. food safety regulatory bodies and their unique legislative authorities, missions, and jurisdictions.

Analyze and distinguish how food safety and governmental biosecurity policies, globalization, and international trade cooperation influence public health.
Contrast the food safety and biosecurity technical needs of different stakeholders and make judgements as to the appropriate methods of collaboration.
<b><i>Infectious Diseases and Zoonoses Competencies</i></b>
Evaluate modes of disease causation of infectious agents.
Investigate the host response to infection.
Examine the influence of environmental and ecological forces on infectious diseases.
Analyze disease risk factors and select appropriate surveillance.
Investigate the role of vectors, toxic plants and other toxins in infectious diseases.
<b><i>Public Health Nutrition Competencies</i></b>
Inform public health practice through analysis of evidence-based policy, systems, and environmental change.
Examine chronic disease surveillance, policy, program planning and evaluation, and program management, in the context of public health nutrition.
Critically examine population-based nutrition programs.
Examine epidemiological concepts of human nutrition in order to improve population health and reduce disease risk.
Describe criteria for validity in nutritional epidemiological methodology.
<b><i>Public Health Physical Activity Competencies</i></b>
Investigate the impact of physical activity on population health and disease outcomes.
Investigate social, behavioral and environmental factors that contribute to participation in physical activity.
Examine and select social and behavioral theories and frameworks for physical activity programs in community settings.
Develop and evaluate physical activity interventions in diverse community settings.
Create evidence-based strategies to promote physical activity and communicate them to community stakeholders.

**Assessment Methods.** All competencies have at least one direct measure as required by CEPH. Assessment information is found on pages 51-77 of the accreditation self-study report and lists the specific assessment by course; this is uploaded as a supplemental document, and linked here <https://www.k-state.edu/mphealth/pdf/ceph/K-State%20CEPH%20%20final%20self-study%20document%202019.pdf> on our website. After the student’s defense the major professor and committee members fill out an Assessment Survey via Qualtrics to assess the student’s five chosen competencies.

**Results.** Assessment from Oct 2018 to Dec 2019 includes 26 students. The 22 Foundational Competencies are grouped into eight areas of public health; 86-100% of students meet or exceed competencies as shown below.

Grouping	Competencies	Meets & Exceeds	Grouping	Competencies	Meets & Exceeds
Evidence-based Approaches to Public Health	1-4	86%	Leadership	16-17	95%
PH and Health Care Systems	5-6	96%	Communication	18-20	95%
Planning & Management to Promote Health	7-11	96%	Interprofessional Practice	21	98%
Policy in Public Health	12-15	100%	Systems Thinking	22	93%

### C. Program Self Review

**Faculty Review of Assessment Data and Process.** Once a year, the MPH faculty advisory council reviews the assessment and survey results for the previous year. [Minutes of the February 2020 Assessment](#) are available on the MPH website and linked above.

**Program Improvements.** During the accreditation review, all assessments and surveys were reviewed and updated. An Exit Interview by the program director was added in 2019 for all graduates, either in person or by phone. A summary of the interviews are included in the February 2020 minutes above, page 2.

**Future Plans.** We will continue to review and implement improvements based on survey and assessment results annually, and continue to meet all CEPH accreditation current and future requirements.

**Summary Paragraph of this Report.** The MPH program has received a 7-year full accreditation from CEPH until December 31, 2026. Our graduation rate of 70% and our employment/continued education range of 90-100% at 1 year after graduation indicates the success of our students and program.

## Section 7: Program Vision

**Program plan for the next 5 years:** The MPH degree aligns with the strengths of the University and our four emphasis areas reflect this: (1) food safety and biosecurity; (2) infectious diseases and zoonoses; (3) public health nutrition; and (4) public health physical activity. This offering of emphasis areas is unique, and aligns with the land grant mission, integrating public health related instruction, research, service and extension activities with our college and department partners, and provides a strong link to individuals, families, and communities throughout the state. The World Health Organization reports that 75% of new diseases affecting humans will be caused by zoonotic pathogens originating from animal reservoirs, therefore a degree program administratively and academically in the College of Veterinary Medicine with interdisciplinary college partners provides unique opportunities and strengths in the expanding area of One Health. We will continue to advance our dual degree options with new K-State degree programs, and work to expand our workforce and educational needs.

**Internal review:** Through the continuation of the self-study process for accreditation and with the help of OEIE, we continue to improve our assessment tools to better align each core and other required courses with our student competencies, as required by CEPH. We also plan to better quantify survey results as well as provide the program administration a feedback mechanism from the course instructors and supervisory committees. Surveys are continuously updated and include feedback from entering students, employers, faculty and graduates/alumni. The addition of in-person exit interviews by the director in 2019 provided feedback and new ideas for improvement and discussion with advisory committee, department heads, and deans.

### **Achievements:**

- Full reaccreditation from CEPH for 7 years (through December 21, 2026).
- A student graduation rate of over 70%.
- A student employment/additional education rate of over 90%.
- Increased the diversity of faculty in the interdisciplinary program.
- Established and maintained relationships with state and local health departments and professionals.

**Challenges:** The need for quality, interprofessional practice (IPP) training and experiences for MPH students is a challenge for public health education. Many different degree programs now require IPP, and a long term goal would be for the MPH program to partner with other programs on campus and offer a seminar, learning module, exercise, etc. that would address this goal. Another challenge is implementing a required system thinking tools module in MPH 840 Public Health Practice. The program requires 42 hours for the degree so we are unable to add additional courses.

**Adjustments or refinements:** The program adjusts goals and outcomes based on and related to maintaining CEPH accreditation. The program's accreditation review in 2019 was in the first year of new standards adopted by CEPH. The new standards required several adjustments to core courses and emphasis area required courses, in addition to new assessments and outcomes for the newly adopted foundational competencies. Faculty teaching these courses continue to update, revise and review the material to maintain compliance. The advantage for our program is having updated curricula aligned with national educational trends in public health and the unique emphasis areas, which continue to attract qualified students.

**Recommendations for retaining the program:** We recommend retaining the MPH program based on current enrollment and future public health career needs. Public health education and training needs continue to expand nationally and globally. The MPH program is poised to meet this need. We anticipate expanding the BS/BA/MPH option to include new BS degrees in development. This allows us to attract additional, qualified undergraduates. We also plan to increase certificate enrollment with an online option to recruit students to the MPH program. In a systematic process, the program will explore online degree options in line with current accreditation requirements to offer the MPH off campus. Two specific groups that would benefit from this are students that have access to the Olathe campus and veterinary professionals who wish to advance in their careers but are place bound.