

**K-State MPH Faculty Advisory Council Meeting**  
**Location: Trotter Hall, Dean's Conference Room**  
**January 8, 2018, at 10:30 AM – Minutes**

<b>Ct</b>	<b>Committee Member</b>	<b>Emphasis</b>	<b>In Attendance</b>
1	Ellyn Mulcahy	MPH Director	X
	Stevenson, Barta	MPH Staff	Non Voting
	Open	MPH Student	
2	Hsu, Wei Wen	Core Instructor	X
3	Larson, Robert	Core Instructor	X
4	Sanderson, Michael	Core Instructor	
5	Gragg, Sara	FSB	
6	Kastner, Justin	FSB	X
7	Nutsch, Abbey	FSB	X
8	Cernicchiaro, Natalia	IDZ	X
9	Nguyen, Annelise	Core Instructor + IDZ	
10	Renter, David	IDZ	
11	Hanson, Jennifer	Core Instructor + PHN	Rosenkranz, S Proxy
12	Rosenkranz, Ric	PHN	X
13	Rosenkranz, Sara	PHN	X
14	Irwin, Brandon	PHPA	
15	Mailey, Emily	PHPA	X
16	McElroy, Mary	Core Instructor + PHPA	Mailey Proxy

Dr. Mulcahy called the meeting to order at 10:35 AM. There was a quorum present.

**Approval of Minutes:**

October 16, 2017 and December 11, 2017 minutes were approved for posting. The November meeting was a work session for each individual emphasis area so there are no minutes to be posted.

**Items for Discussion:**

The meeting focused on Tables D1-1 and D2-2 for the CEPH Self Study. Each table was reviewed and the instructors will be notified if additional information for assessment is needed. (Attachment 1)

Emphasis area courses and mapping, Tables D2-1 and D4-1 were also discussed. The new groupings will need to go through Course and Curriculum. Please have your updates to the MPH office by next week. (Attachment 2)

Dr. Mulcahy will contact faculty individually about any remaining details that need to be submitted.

**FYI Items:**

Dates, times and meeting rooms for Spring 2018 are below. We will keep the same schedule, second Monday of each month at 10:30 am, knowing that everyone cannot make every meeting.

<b>Date (Monday)</b>	<b>Time</b>	<b>Room</b>
January 8	10:30 am to Noon	Trotter Hall Rm 113, Dean's Conference Room
February 12	10:30 am to Noon	Union Rm 204
March 12	10:30 am to Noon	Trotter Hall Rm 113, Dean's Conference Room
April 9	10:30 am to Noon	Union Rm 204
May 14	10:30 am to Noon	Trotter Hall Rm 113, Dean's Conference Room
June 11	10:30 am to Noon	Union Rm 204

The meeting adjourned at 11: 20 AM.

# Attachment 1

## D1. MPH Foundational Public Health Knowledge

**D1-1. Provide matrix that indicates how all MPH students are grounded in each of the defined foundational public health learning objectives.**

**Table 1. Template D1-1. Content Coverage for MPH.**

<b>Content</b>	<b>Course number(s) or other educational requirements</b>	<b>Specific Assessment Opportunity</b>
1. Explain public health history, philosophy and values	<p>MPH 720, Administration of Health Care Organizations</p> <p>MPH/DMP 754 Introduction to Epidemiology</p>	<p>Assessed by exam.</p> <p>754: Assessed by quiz 1-2, quiz 15-1, quiz 15-2, quiz 15-3, and Exam 1 Including questions on: the history of epidemiology (Quiz 1-2), the first use of administrative databases to study disease (Quiz 1-2), the predominant disease prevention strategies employed by epidemiologists (Quiz 15-1), ethical issues associated with data mining and other epidemiological research methods (Quiz 15-3), and epidemiologic approaches to disease investigation (Exam 1)</p>
2. Identify the core functions of public health and the 10 Essential Services*	MPH 720, Administration of Health Care Organizations	720 Exam 1 (2017 v.A) questions #36 requires the student to list the 10 essential services and the core functions of public health.
3. Explain the role of quantitative and qualitative methods and sciences in describing and assessing a population's health	<p>MPH 701, Fundamental Methods of Biostatistics</p> <p>MPH 720, Administration of Health Care Organizations</p> <p>MPH/DMP 754 Introduction to Epidemiology</p>	<p>701: Assessed by all homework and Exams. Describe the population's health with descriptive statistics and use advanced statistical inference tools, such as confidence interval, hypothesis testing and regression models, to answer these scientific questions related to public health.</p> <p>720: Stakeholder interview assignment requires the students to utilize qualitative methods in assessing community health.</p> <p>754: Assessed by calculating quantitative measures of population health (Assignment 1, Assignment 2, &amp; Assignment 3) and Examinations 1, 2, &amp; 3 Including questions requiring students to calculate amount of disease in a population (Assignment 1 &amp; Exam 1), measures of association (Assignment 2 &amp; Exam 2), and effect of risk factors on exposed populations, and effect</p>

## Attachment 1

		of risk factors on entire populations (Assignment 3 & Exam 3).
4. List major causes and trends of morbidity and mortality in the US or other community relevant to the school or program	<p>MPH 720, Administration of Health Care Organizations</p> <p>MPH 754, Introduction to Epidemiology</p>	<p>720: Exam 1 (2017 v.A) question #18 requires students to know the relative life expectancy of different racial/ethnic group in the US.</p> <p>754: Discussion questions 1&amp;3 Including questions on shifts in leading causes of death over time (Discussion Question 1) and the role of epidemiology to identify public health priorities based on changing disease trends (Discussion Question 3).</p>
5. Discuss the science of primary, secondary and tertiary prevention in population health, including health promotion, screening, etc.	<p>MPH 701, Fundamental Methods of Biostatistics</p> <p>MPH 720, Administration of Health Care Organizations</p> <p>MPH 754, Introduction to Epidemiology</p>	<p>701: Use probability tool: Bayes' rule to evaluate the health screening test. Homework 2 and Exam 1.</p> <p>720: Quiz 1a (2017) questions #3-4 requires students to identify the prevention level when given examples of different interventions.</p> <p>754: Exam 1 &amp; Discussion Question 2 Including questions asking students to identify different public health interventions as primary, secondary, or tertiary (Exam 1), questions requiring students to design and justify a disease screening strategy (Exam 1 and Discussion Question 2)</p>
6. Explain the critical importance of evidence in advancing public health knowledge	<p>MPH 701, Fundamental Methods of Biostatistics</p> <p>MPH 720, Administration of Health Care Organizations</p> <p>MPH 754, Introduction to Epidemiology</p>	<p>701: Assessed by homework 5, 6, 7 and Exam 3. Use advanced statistical inference tools, such as confidence interval, hypothesis testing, to evaluate the importance of evidence in advancing public health knowledge.</p> <p>720: Exam 2 (2017 v.A), question #9 requires students to know the mission of the federal agency AHRQ (Agency for Healthcare Research and Quality).</p> <p>754: Exam 3 Including questions on causal criteria and evidence based medicine/public health (Exam 3)</p>
7. Explain effects of environmental factors on a population's health	<p>MPH 701, Fundamental Methods of Biostatistics</p> <p>MPH 802, Environmental Health</p>	<p>701: Assessed by homework 8 and Final Exam. Use regression models to evaluate the environmental factors on the health outcomes of population.</p> <p>802: Quizzes on the effects of environmental factors on population's health: quiz 1. Environmental hazards to human health and</p>

## Attachment 1

		policy; quiz 2. Natural environmental factors/natural resources on population's health; quiz 3. Manufactured goods and occupational health; quiz 4. Process of producing food on human health; quiz 5. urbanization on population's health
8. Explain biological and genetic factors that affect a population's health	MPH 754, Introduction to Epidemiology	754: Exam 2, Exam 3, quiz 12-4 Including questions on assessing multiple variables at the same time (Exam 2 & Exam 3) and specifically the methods to investigate the role of environment and genetics on disease risk and prognosis (Quiz 12-4).
9. Explain behavioral and psychological factors that affect a population's health	MPH 701, Fundamental Methods of Biostatistics	701: Assessed by homework 8 and Final Exam. Use regression models to evaluate the environmental factors on the health outcomes of population.
	MPH 720, Administration of Health Care Organizations	720: Exam 2 (2017 v.A), question #38 requires students to list major barriers to mental health care.
	MPH 818, Social and Behavioral Bases of Public Health	MPH 818-Exam 1
10. Explain the social, political and economic determinants of health and how they contribute to population health and health inequities	MPH 720, Administration of Health Care Organizations	720: Exam 1 (2017, v.1), requires students to identify the general characteristics of the US Health Care System (questions #2 & #8), and the Affordable Care Act (questions #19 & #21). Quiz 1a (2017) questions #1 & #2 requires students to distinguish between Medicare, CHIP, and Medicaid. Quiz 1a (2017) questions #8 & #9 requires students to identify the meaning of the terms "moral hazard" and "defensive medicine". Exam 2 (2017, v.A), question #35 students must identify which branch of government is responsible for developing and submitting budget proposals to congress. Exam 2 (2017, v.A), question #20 students must identify which division of government is responsible for interpreting and implementing new laws. Quiz 2a, question #4 requires students to identify the determinants of health according to Blum's Force Field.
	MPH 818, Social and Behavioral Bases of Public Health	MPH 818-16 question health equity quiz.
11. Explain how globalization affects global burdens of disease	MPH 802, Environmental Health	Quiz 2 assesses globalization contributing to an increase in infectious diseases

## Attachment 1

	MPH 754, Introduction to Epidemiology	754: Discussion question 3 Including questions requiring students to compare risk factors and disease burden in developed and developing countries (Discussion Question 3)
12. Explain an ecological perspective on the connections among human health, animal health and ecosystem health (eg, One Health)	MPH 802, Environmental Health	Quizzes 1, 2, 3, 4, and 5 assess the relationship between environment, animal, and human producing adverse effects.

## Attachment 1

**D2-2. Matrix that indicates the assessment activity for each of the foundation competencies (1-22).**

**Table 2. Template D2-2. Assessment of Competencies for MPH degree**

Competency	* Course number(s) and name(s)	Specific assessment opportunity
<b>Evidence-based Approaches to Public Health</b>		
1. Apply epidemiological methods to the breadth of settings and situations in public health practice	MPH 701, Fundamental Methods of Biostatistics	701: Assessed by Exam 2. Using probability tools correctly to public health practice is the aim. The questions on calculating prevalence and incidence, as well as sensitivity and specificity were given.
	MPH 754, Introduction to Epidemiology	754: Discussion Questions 1, 2, &3, and Assignment 1. Questions on chronic diseases such as cancer and heart disease (Discussion Question 1), infectious disease (Assignment 1 & Discussion Question 2), disease screening (Discussion Question 3); and at the population levels of schools (Discussion Question 1), communities (Assignment 1), nations (Discussion Question 1), and risk groups based on behaviors (Discussion Question 2)
2. Select quantitative and qualitative data collection methods appropriate for a given public health context	MPH 701, Fundamental Methods of Biostatistics	701: Evaluated by Homework 5 & 6 and Exam 2 & 3. Questions on the sample size and power calculation for the associated study designs (/data collection design) were given.
	MPH 720, Administration of Health Care Organizations  MPH 754, Introduction to Epidemiology	720: Exam 1(2017 v.A) question #5 requires students to understand the broad differences between qualitative and quantitative methods.  754: Discussion Question 1, Assignments 2&3, and Exam 3. Questions that require students to select and calculate the best measures for specific disease based on chronicity, lethality, contagiousness, and other attributes (Discussion Question 1, Assignment 1, Assignment 2, and Exam 3)
3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate	MPH 701, Fundamental Methods of Biostatistics	701: Assessed by all homework and Exams. Describe the population's health with descriptive statistics and use advanced statistical inference tools to answer these scientific questions related to public health. The basic analysis with SAS is evaluated by Exam 1.
	MPH 754, Introduction to Epidemiology	754: Assignments 1,2,&3, and Exams 1,2,&3. Questions that require students to calculate

## Attachment 1

		various measures of incidence, prevalence, attributable risk, and population risk (Assignments 1,2,&3, Exams 1,2,&3)
4. Interpret results of data analysis for public health research, policy or practice	MPH 701, Fundamental Methods of Biostatistics	701: Assessed by all homework and Exams. Describe the population's health with descriptive statistics and use advanced statistical inference tools, such as confidence interval, hypothesis testing and regression models, to answer these scientific questions related to public health.
	MPH 754, Introduction to Epidemiology	754: Discussion Questions 1,2, &3, Assignments 1, 2,&3, and Exams 1,2,&3. Questions that require students to interpret disease measures and the application of those interpretations at risk-group, community, and population level decisions and policy (Discussion Questions 1,2, &3, Assignments 1,2, &3, and Exams 1,2, &3).
<b>Public Health &amp; Health Care Systems</b>		
5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings	MPH 720, Administration of Health Care Organizations	720: Quiz 1a (2017) requires students to understand the concept of primary care (question #5), acute care (question #7), and the Quad Functional Model of Basic Health Care Delivery Systems (question #6). Exam 2 (2017 v.A) question #5 requires students to understand the authority structure over the local county health department. Quiz 4a (2017) questions #7-9, requires students to distinguish between distributive policies, redistributive policies, and regulatory tools.
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	MPH 818, Social and Behavioral Bases of Public Health	
<b>Planning &amp; Management to Promote Health</b>		
7. Assess population needs, assets and capacities that affect communities' health	MPH 720, Administration of Health Care Organizations	720: Exam 2 (2017 v.A) question #39 requires students to describe the factors used in the yearly Robert Johnston Foundation County Health Rankings
8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs	MPH 818, Social and Behavioral Bases of Public Health	
9. Design a population-based policy, program, project or intervention	MPH 754, Introduction to Epidemiology	754: Discussion question 3, Assignment 3 Questions requiring students to describe the factors that federal and state agencies should

## Attachment 1

		use to prioritize public funds (Discussion Question 3), and requiring students to describe how different measures of disease are used to inform policy for different types of populations (Assignment 3).
10. Explain basic principles and tools of budget and resource management	<p>MPH 720, Administration of Health Care Organizations</p> <p>MPH 754, Introduction to Epidemiology</p>	<p>720: Exam 1 (2017, v.1) question # 35 requires students to describe 2 managed care methods used to monitor and control utilization of health care services. Exam 2 (2017, v.A), question #18 requires students to understand the difference between operational and capital budgets, question #34 requires students to quantify the relative cost of fraudulent health care billing. Quiz 4a (2017), question #6 requires students to understand the basic concept of block grants.</p> <p>754: Discussion question 3, Exam 3, quiz 14-5. Questions requiring students to calculate and interpret different measures of disease for the purpose of informing policy based on the best use of scarce resources (Assignment 3), screening test resources (Exam 3), and total optimum cost (Quiz 14-5).</p>
11. Select methods to evaluate public health programs	<p>MPH 701, Fundamental Methods of Biostatistics</p> <p>MPH 754, Introduction to Epidemiology</p>	<p>701: Assessed by Exam 3 and final exam. Use confidence intervals and hypothesis testing to evaluate the programs.</p> <p>754: Discussion question 3, Assignment 3, Exam 3 Questions requiring students to defend their choice of measures to base decisions for individuals and communities (Discussion Question 3), to calculate and interpret population relative risk, population attributable risk and attributable fractions (Assignment 3 &amp; Exam 3).</p>
<b>Policy in Public Health</b>		
12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence	MPH 754, Introduction to Epidemiology	754: Discussion question 3, Assignment 3, Exam 3 Questions requiring students to consider raw death risk, quality of life lost, years of potential life lost, emerging disease problems, and effectiveness of intervention when allocating scarce public health resources (Discussion Question 3), to require students to apply the criteria for causation when evaluating a study linking a risk factor to an outcomes (Assignment 3), to ask students how levels of evidence and ethical considerations for data collection impact their conclusions from epidemiologic studies (Exam 3).
13. Propose strategies to identify stakeholders and build coalitions and	MPH 720, Administration of Health Care Organizations	720: Stakeholder interview assignment requires the students to identify stakeholders within the State of Kansas.



## Attachment 1

partnerships for influencing public health outcomes		
14. Advocate for political, social or economic policies and programs that will improve health in diverse populations	MPH 818, Social and Behavioral Bases of Public Health	
15. Evaluate policies for their impact on public health and health equity	MPH 754, Introduction to Epidemiology	754: Discussion Questions 2 & 3, Assignment 3, Exam 3 Questions requiring students to calculate both risk-group and population-level risk reduction measures on potential public health interventions and their interpretation regarding implementing those interventions based on the calculated values (Discussion Questions 2&3), and to consider different population-groupings when evaluating health outcomes (Assignment 3 and Exam 3).
<b>Leadership</b>		
16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making	MPH 720, Administration of Health Care Organizations	720: Reflection paper assignment requires students to take notes and reflect upon guest lecture topics related to leadership/management. 720 Exam 2 (2017, v.A), question #36 students must provide examples of potential organizational threats and offer administrative actions which could decrease the risk.
17. Apply negotiation and mediation skills to address organizational or community challenges	MPH 720, Administration of Health Care Organizations	720: Reflection paper assignment requires students to take notes and reflect upon guest lecture topics related to negotiation and mediation.
<b>Communication</b>		
18. Select communication strategies for different audiences and sectors	MPH 840 Field Experience and poster	840: Final paper and PowerPoint Presentation
19. Communicate audience-appropriate public health content, both in writing and through oral presentation	MPH 754, Introduction to Epidemiology	754: Discussion questions 1, 2, & 3, Assignments 1, 2, & 3 Questions requiring students to provide written instructions or feedback for use by a variety of audiences (i.e. patients/public (Discussion Question 2, Assignment 1&3); and health professionals (Discussion Questions 1,2&3, Assignments 1,2&3)
20. Describe the importance of cultural competence in communicating public health content	MPH 818, Social and Behavioral Bases of Public Health	
<b>Interprofessional Practice</b>		
21. Perform effectively on interprofessional^ teams	MPH 840 Field Experience	840: Preceptor and teams with which they work.
<b>Systems Thinking</b>		

## Attachment 1

22. Apply systems thinking tools to a public health issue	MPH 754, Introduction to Epidemiology	754: Discussion question 2 & 3 Questions that required students to alter decisions based on differing prior knowledge (Discussion Question 2) and to consider upstream and downstream factors when allocating public resources (Discussion Question 3).
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\* The Council understands that schools and programs may assess each competency multiple times. This template need not catalog all assessments of the competency. The school or program may choose an example for each, but must present sufficient information to assure reviewers that no MPH student could complete the program without being assessed on each of the listed competencies.

^ "Interprofessional education occurs when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes." From: Framework for Action on Interprofessional Education & Collaborative Practice (WHO/HRH/HPN/10.3).

In this context, "interprofessional" refers to engagement with professionals outside of public health (eg, architects, nurses), rather than to engagement with individuals from other public health disciplines (eg, biostatisticians, health promotion specialists).

## Attachment 2

### D2. MPH Foundational Competencies

**D2-1. List coursework and other learning experiences required for the program's MPH degrees, including the required curriculum for each concentration and combined degree option.**

**Table 3. Template D2-1. Requirements for MPH degree.**

Requirements for MPH degree		
Course number	Course name*	Credits (if applicable)
<b><i>"Core Courses" Required for each emphasis</i></b>		
MPH 701	Fundamental Methods of Biostatistics	3
MPH 802	Environmental Health	3
MPH 754	Introduction to Epidemiology	3
MPH 720	Administration of Health Care	3
MPH 818	Social and Behavioral Bases of Public Health	3
<b><i>Food Safety and Biosecurity Emphasis</i></b>		
<b>Required courses for all FSB Students</b>		
FDSCI 730	Multidisciplinary Overview of Food Safety & Biosecurity	2
FDSCI 731	Food Protection & Defense – Essential Concepts	2
DMP 815	Multidisciplinary Thought and Presentation	3
DMP 816	Trade and Agricultural Health	2
DMP 888	Globalization, Cooperation, and the Food Trade	1
<b>Elective Courses for FSB Students (remaining credits needed for degree are selected from the list below)</b>		
AAI 801	Interdisciplinary Process	3
DMP 710	Introduction to One Health	2
DMP 806	Environmental Toxicology	2
DMP 844	Global Health Issues	3
DMP 855	Disease Detection, Surveillance, and Risk Assessment	3
DMP 880	Problems in Pathobiology	variable
FDSCI 600	Food Microbiology	2
FDSCI 601	Food Microbiology Lab	2
FDSCI 690	Principles of HACCP and HARPC	3
FDSCI 695	Quality Assurance of Food Products	3
FDSCI 750	Food Toxicants	2
FDSCI 751	Food Laws and the Regulatory Process	2

## Attachment 2

FDSCI 753	Risk Assessment for Food, Ag, and Vet Med	2
FDSCI 791	Advanced Applications of HACCP Principles	3
FDSCI 820	Advanced Food Microbiology and Biotechnology	2
MC 750	Strategic Health Communication	3
MC 760	Communication and Risk	3
STAT 705	Regression and Analysis of Variance	3
<b><i>Infectious Diseases and Zoonoses</i></b>		
<b>Required courses for all IDZ Students</b>		
BIOL 530 or	Pathogenic Microbiology	3
DMP 812	Veterinary Bacteriology and Mycology (lecture and lab)	4
BIOL 670 or	Immunology	4
DMP 705	Principles of Veterinary Immunology	3
DMP 710	Introduction to One Health	2
AAI 801 or	Interdisciplinary Process	3
DMP 815	Multidisciplinary Thought and Presentation	3
<b>Elective Courses for IDZ Students (remaining credits needed for degree are selected from the list below)</b>		
ASI 540	Principles of Animal Disease Control	3
BIOL 545	Human Parasitology	3
BIOL 546	Human Parasitology Laboratory	1
BIOL 604	Biology of Fungi	3
BIOL 675	Genetics of Microorganisms	3
BIOL 687	Microbial Ecology	3
BIOL 730	General Virology	3
DMP 718	Veterinary Parasitology	4
DMP 822	Veterinary Virology	3
DMP 860	Pathogenic Mechanisms	3
BIOL 671	Immunology Laboratory	2
DMP 850	Domestic Animal Immunology	3
DMP 880	Problems in Pathobiology	1-6
BIOL 529	Fundamentals of Ecology	3
DMP 770	Emerging Diseases	3
DMP 801	Toxicology	2
DMP 806	Environmental Toxicology	2
DMP 816	Trade & Agricultural Health	2
DMP 822	Veterinary Virology	3
DMP 830	Quantitative Analysis	3
DMP 844	Global Health Issues	3
DMP 850	Domestic Animal Immunology	3

## Attachment 2

DMP 854	Intermediate Epidemiology	3
DMP 855	Disease Detection, Surveillance and Risk Assessment	3
DMP 860	Pathogenic Mechanisms	3
DMP 871	Molecular Diagnostics of Infectious Diseases	3
DMP 880	Problems in Pathobiology	1-6
DMP 888	Globalization, Cooperation & the Food Trade	2
DMP 954	Advanced Epidemiology	4
ENTOM 849	Biology of Disease Vectors	3
FDSCI 690	Principles of HACCP	2
FDSCI 730	Overview of Food Safety and Security	2
FDSCI 731	Food Protection and Defense - Essential Concepts	2
GEOG 508	Geographic Information Systems I	4
GEOG 608	Geographic Information Systems II (prerequisite GEOG 508)	3
MC 750	Strategic Health Communication (alternate years)	3
MC 760	Communication and Risk (alternate years)	3
STAT 705	Regression and Analysis of Variance	3
STAT 716	Non-parametric Statistics	3
STAT 717	Categorical Data Analysis	3
STAT 720	Design of Experiments	3
STAT 730	Multivariate Statistics Methods	3
<b>Public Health Nutrition</b>		
<b>Required courses for all PHN Students</b>		
FNDH 600	Public Health Nutrition	3
FNDH 820	Functional Foods for Chronic Disease Prevention	3
FNDH 844	Nutritional Epidemiology	3
FNDH 880	Graduate Seminar in Human Nutrition	1
<b>Elective Courses for PHN Students (remaining credits needed for degree are selected from the list below)</b>		
AAI 801	Interdisciplinary Process	3
FNDH 620	Nutrient Metabolism	3
FNDH 631	Clinical Nutrition I	3
FNDH 632	Clinical Nutrition II	3
FNDH 635	Nutrition and Exercise	3
FNDH 700	Global Health and Nutrition	3
FNDH 718	Physical Health and Aging	3
FNDH 726	Nutrition and Wellness	3
FNDH 735	Advanced Energy Balance	3
FNDH 780	Problems in Nutrition	Variable
FNDH 782	Topics in Human Nutrition	3

## Attachment 2

FNDH 800	Nutrition Education and Communication	3
FNDH 810	Advanced Macronutrient Metabolism	5
FNDH 812	Advanced Micronutrient Metabolism	3
FNDH 812	Nutrient Metabolism	3
FNDH 841	Consumer Response Evaluation	3
FNDH 862	Maternal and Child Nutrition	3
FNDH 891	Environmental Scanning and Analysis of Current Issues in Dietetics	3
FSHS 714	Program Design, Evaluation, and Implementation	3
KIN 610	Program Planning and Evaluation	3
KIN 805	Physical Activity and Human Behavior	3
MC 750	Strategic Health Communication (alternate years)	3
MC 760	Communication and Risk (alternate years)	3
PSYCH 518	Introduction to Health Psychology	3
SOCIO 541	Wealth, Power and Privilege	3
SOCIO 570	Race and Ethnic Relations in the USA	3
STAT 705	Regression and Analysis of Variance	3
STAT 710	Sample Survey Methods	3
STAT 713	Applied Linear Stat Models	3
STAT 716	Non-parametric Statistics	3
STAT 717	Categorical Data Analysis	3
STAT 720	Design Experiments	3
STAT 725	Intro to SAS Computing	1
STAT 730	Multivariate Statistical Methods	3
<b>Public Health Physical Activity</b>		
<b>Required courses for all PPHA Students</b>		
KIN 610	Program Planning and Evaluation	3
KIN 612	Policy, Built Environment and Physical Activity	3
KIN 805	Physical Activity and Human Behavior	3
<b>Elective Courses for PPHA Students</b> <b>(remaining credits needed for degree are selected from the list below)</b>		
AAI 801	Interdisciplinary Process	3
FNDH 600	Public Health Nutrition	3
FNDH 844	Nutritional Epidemiology	3
KIN 600	Interpersonal Aspects of Physical Activity	3
KIN 602	Social Structural Determinants of Physical Activity	3
KIN 606	Topics in the Behavioral Basis of Kinesiology	1-3
KIN 614	Physical Activity Behavior Settings: Youth Sport to Senior Centers	3
KIN 625	Exercise Testing and Prescription	3
KIN 635	Nutrition and Exercise	3

## Attachment 2

KIN 655	Individual Physical Activity Promotion	3
KIN 797	Topics: Public Health Physical Activity Behavior	1-4
KIN 815	Research Methods in Kinesiology	3
KIN 851	Topics in the Physiological Basis of Kinesiology (1-3 hrs) (Students without an undergraduate class in physiology will be required to take this class.)	1-3
KIN 852	Topics in the Behavioral Basis of Kinesiology (1-3 hrs) (Students without an undergraduate class in behavior science will be required to take this class.)	1-3
KIN 896	Independent Study (instructor permission)	1-3
MC 750	Strategic Health Communication	3
SOCIO 541	Wealth, Power and Privilege	3
SOCIO 545	Sociology of Women	3
SOCIO 570	Race and Ethnic Relations in the United States	3
STAT 705	Regression and Analysis of Variance	3
STAT 710	Sample Survey Methods	3
STAT 716	Non-parametric Statistics	3
STAT 717	Categorical Data Analysis	3
STAT 720	Design of Experiments	3
STAT 725	Intro to SAS Computing	1
STAT 730	Multivariate Statistics Methods	3

## Attachment 2

### D4. MPH Concentration Competencies

**D4-1. Provide a matrix that lists at least five competencies in addition to those defined in Criterion D2 and D3, and indicate at least one assessment activity for each of the competencies.**

**Table 4. Template D4-1. Competencies for each emphasis area.**

Content	Course number(s) or other educational requirements	Specific Assessment Opportunity
<b><i>Food Safety and Biosecurity emphasis area competencies.</i></b>		
<b>1. Food safety and biosecurity.</b> Describe the challenges and solutions for food safety, biosecurity, and defense issues in the food production continuum.	FDSCI 730-Multidisciplinary Overview of Food Safety and Security  FDSCI 731-Road Protection and Defense: Essential Concepts	FDSCI 730: Report #4  FDSCI 731: Module B Quizzes (L1, L2, CS1, L3, L4, L5)
<b>2. Threats to the food system.</b> Categorize specific threats to the food system and scientifically identify how each can be prevented, controlled, and/or mitigated in the food production system.	FDSCI 730-Multidisciplinary Overview of Food Safety and Security  FDSCI 731-Road Protection and Defense: Essential Concepts	FDSCI 730: Quiz, Lecture D1; Quiz, Lecture F1  FDSCI 731: Module C, Quizzes (L6, L7); Module E Quizzes (L13, L15, L16); Module F Quiz (CS2)
<b>3. Food safety laws and regulations.</b> Identify key US food safety regulatory bodies and their legislative authorities, missions, and jurisdictions.	DMP 816-Trade & Agricultural Health	DMP 816: Module 5 quiz, questions #2, 3, 4, 5 and 6
<b>4. Food safety policy and the global food system.</b> Describe how food safety and biosecurity policies, globalization, and international trade influence public health.	DMP 888 Globalization, Cooperation, and the Food Trade	DMP 888: Module 1 assignment (questions 2, 4, and 6); Module 3 assignment (questions 2, 3, and 4); and Module 7 assignment (questions 1 and 4).
<b>5. Effective communication.</b> Develop and illustrate effective strategies to communicate public health/food safety issues to a variety of audiences.	DMP 815-Multidisciplinary Thought & Presentation	DMP 815: News Release; Technical Report; Scientific Seminar/Abstract
<b><i>Infectious Diseases and Zoonoses emphasis area competencies.</i></b>		



## Attachment 2

Content	Course number(s) or other educational requirements	Specific Assessment Opportunity
<b>1. Pathogens/pathogenic mechanisms.</b> Understand and be able to describe the ecology and modes of disease causation of infectious agents such as bacteria, viruses, parasites, and fungi.	BIOL 530 – Pathogenic Microbiology or  DMP 812 – Veterinary Bacteriology and Mycology	
<b>2. Host response to pathogens/immunology.</b> Describe the current understanding of host immune response to infection and understand the role of vaccination in infectious disease control.	BIOL 670 – Immunology  or  DMP 705 – Principles of Veterinary Immunology	<p>BIOL 670: Exam 1 will ask students to understand the innate immune responses and antibody structure and function. For exam 2, the students will understand T cell biology and cytokine biology. Exam 3 will require student understanding and be able to apply both adaptive and innate concepts to infectious disease. Exam 4 will focus on vaccinations to control the infectious diseases and autoimmunity. Each of these concepts will be demonstrated by the student applying the material to research or clinical problems involving humans or vertebrate animals.</p> <p>DMP 705: Exam 1 questions 1b-f asks students to name the first sentinel cell to arrive at infection site, sentinel cell located at portals of pathogen entry, pathogen recognition mechanisms, and mechanisms of evading destruction by immune effectors. Exam 2 question 1 ask students to explain the role played by MHC molecules and MHC polymorphisms in immune responses against extracellular and intracellular pathogens; questions 2d-e ask student to list cytokines produced by Th17 cells, the effect of the cytokines on host immune response, and name a pathogen that requires a strong Th17 response in order to be controlled/cleared; question 3 ask students to identify adaptive immune response mechanisms involved in clearance of intracellular bacterial infections. Exam 3, questions 1a-d ask students to explain how an adjuvant works and give examples of different types of adjuvants/role in influencing type of immune responses for protection against infectious microbial pathogens; describe different types of vaccines/describe how they work in inducing immune protection and give an example of each; define core/noncore vaccines and give one example of each.</p>

## Attachment 2

Content	Course number(s) or other educational requirements	Specific Assessment Opportunity
<b>3. Environmental/ecological influences.</b> Understand the influence of space/geography, insect vectors, toxic plants and other toxin sources, as well as infectious agents on infectious disease and food safety.	DMP 710 – Introduction to One Health	
<b>4. Disease surveillance/quantitative methods.</b> Understand how disease events and risk factors for disease are quantified and compared.	DMP 710 – Introduction to One Health	
<b>5. Effective communication.</b> Develop and demonstrate effective strategies to communicate public health/infectious disease issues to a variety of audiences.	AAI 801 – Interdisciplinary Process  or  DMP 815-Multidisciplinary Thought and Presentation	DMP 815: News Release; Technical Report; Scientific Seminar/Abstract
<b><i>Public Health Nutrition emphasis area competencies.</i></b>		
<b>1. Information literacy of public health nutrition.</b> Demonstrate information literacy through the acquisition of public health nutrition knowledge and skills necessary to locate, understand, and evaluate and use that information efficiently and effectively for public health practice.	FNDH 600 – Public Health Nutrition  FNDH 820 – Functional Foods for Chronic Disease Prevention  FNDH 844 – Nutritional Epidemiology	FNDH 600: Online quizzes from peer-reviewed articles;  FNDH 820: Reviewed paper;  FNDH 844: Critical appraisals of peer-reviewed articles
<b>2. Translate research into practice.</b> Translate research into practice through skills in nutrition surveillance, policy, program planning and evaluation, management, information dissemination and oral and written communication.	FNDH 600 – Public Health Nutrition  FNDH 820 – Functional Foods for Chronic Disease Prevention	FNDH 600: Food security service-learning project;  FNDH 820: Reviewed paper
<b>3. Population-based health administration.</b> Utilize advance principles of	FNDH 600 – Public Health Nutrition	FNDH 600: Food security service-learning project

## Attachment 2

Content	Course number(s) or other educational requirements	Specific Assessment Opportunity
health literacy, including critical thinking skills, literature searches, data collection and interpretation, necessary for the implementation and administration of population-based food, nutrition and health services.		
<b>4. Integrate knowledge of human nutrition principles.</b> Integrate knowledge of human nutrition principles with epidemiological concepts in order to improve population health and reduce disease risk.	FNDH 600 – Public Health Nutrition	FNDH 600: Quiz and exam covering food safety
<b>5. Effective communication.</b> Develop and illustrate effective strategies to communicate public health/nutrition issues to a variety of audiences.	FNDH 844 – Nutritional Epidemiology  FNDH 880 – Graduate Seminar in Human Nutrition	FNDH 844: Oral presentation of peer-reviewed articles;  FNDH 880: Research seminar presentations
<b><i>Public Health Physical Activity emphasis area competencies.</i></b>		
<b>1. Population health.</b> Develop evidence-based knowledge of the relationship between physical activity and population health.	KIN 612 – Policy, Built Environment and Physical Activity	
<b>2. Social, behavioral and cultural influences.</b> Understand how social, behavioral and cultural factors contribute to participation in physical activity.	KIN 610 – Program Planning and Evaluation  KIN 805 – Physical Activity and Human Behavior	KIN 610 – Program Planning and Evaluation  KIN 805 – Physical Activity and Human Behavior
<b>3. Theory application.</b> Understand how social and behavioral theory and frameworks are used in programs designed to promote physical activity in community settings.	KIN 610 – Program Planning and Evaluation  KIN 805 – Physical Activity and Human Behavior	KIN 610 – Program Planning and Evaluation  KIN 805 – Physical Activity and Human Behavior
<b>4. Creating and evaluating interventions.</b> Develop skills for creating and	KIN 610 – Program Planning and Evaluation	KIN 610 – Program Planning and Evaluation

## Attachment 2

Content	Course number(s) or other educational requirements	Specific Assessment Opportunity
evaluating physical activity interventions in diverse community settings.	KIN 805 – Physical Activity and Human Behavior	KIN 805 – Physical Activity and Human Behavior
<b>5. Effective communication.</b> Develop the ability to collaboratively communicate with public health officials and other community partners to promote physical activity in community settings.	KIN 610 – Program Planning and Evaluation  KIN 612 – Policy, Built Environment and Physical Activity	KIN 610 – Program Planning and Evaluation  KIN 612 – Policy, Built Environment and Physical Activity