

***Student Learning Outcomes and Competencies***  
***Emphasis: Public Health Nutrition***

The MPH Program is dedicated to assessment of student learning and to appropriate changes in curriculum and courses whenever necessary. At the completion of the degree the student should be able to meet all the Graduate School’s Student Learning Outcomes (SLOs), the MPH SLOs, along with the MPH Core Competencies and the Emphasis Area Competencies. All courses taken for the degree are expected to meet at least one core or emphasis area competency.

***Kansas State University Graduate Student Learning Outcomes***

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| <b>Knowledge</b>                          | Demonstrate [a] thorough understanding and/or competency in a specific area of emphasis, study, or profession.  |
| <b>Skills</b>                             | Demonstrate the ability to apply knowledge through critical thinking, inquiry, analysis, and communication to solve problems and to produce scholarly and creative works including but not limited to design, art, performance, [and/or] original research in the form of [a] thesis or dissertation. |
| <b>Attitudes and Professional Conduct</b> | Exhibit an awareness of their responsibilities (professional integrity, ethical behavior, ability to work with diverse groups of peoples, etc.) and engage in professional conduct towards all constituent groups, including students, faculty, public, etc.  |

***MPH Student Learning Outcomes and Core Competencies Expected of Each MPH Student***

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| <b>MPH SLO: Knowledge and Skills</b>  |  |
| Demonstrate these core competencies in each of the five core areas of public health and in at least one area of emphasis.   |  |
| <b>Biostatistics</b><br>Required Course: MPH 701 – Fundamental Methods of Biostatistics (3 hrs)   | Apply descriptive and inferential methodologies for testing specific public health or research hypotheses according to the type of study design and measurement scale.   |
|   | Apply basic informatics techniques in the acquisition of public health data and in the analysis of survey and experiential designs.  |
| <b>Environmental Health Sciences</b><br>Required Course: MPH 802 - Environmental Health (3 hrs)   | Describe genetic and physiological factors that affect health outcomes following exposure to environmental hazards.  |
|   | Explain the general mechanisms of toxicity in eliciting an adverse response to various environmental exposures.  |
|   | Describe current environmental risk assessment methods, and be able to specify approaches for assessing, preventing, and controlling environmental hazards that pose risks to human health and safety.   |
| <b>Epidemiology</b><br>Required Course: MPH 754 - Introduction to Epidemiology (3 hrs)<br><b>Or</b><br>MPH 708 - Veterinary Epidemiology (2 hrs)<br>AND MPH 854 - Intermediate Epidemiology (3 hrs) | Properly calculate and use measures of disease, injuries, and death in human populations (e.g., prevalence, incidence, relative risk, attributable risk, population attributable risk, etc.) to describe problem magnitude; and to investigate associations to such consideration as age, gender/sex, race, occupation, social characteristics, diet, and environment. |
|   | Draw appropriate inferences from epidemiologic data, and identify the data’s strengths and limitations.  |
|   | Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use, and dissemination of epidemiological data.   |
| <b>Health Services Administration</b><br>Required Course: MPH 720 - Administration of Health Care Organizations (3 hrs)   | Recognize how the roles and interaction between various stakeholders in the healthcare system (including health care providers, other members of the healthcare workforce, consumers of healthcare, etc.) impact the accessibility of healthcare.  |
|   | Describe the demographic trends which impact healthcare, and in turn, public health in the United States.  |
| <b>Social and Behavioral Sciences</b><br>Required Course: MPH 818 - Social and Behavioral Bases of Public Health (3 hrs)  | Identify basic theories, concepts, and models from a range of social and behavioral disciplines that are used in public health intervention and policies.  |
|   | Identify the causes of social and behavioral factors that affect the health of individuals and populations with specific emphasis on underserved populations.  |

In addition to the above, each MPH emphasis area has its own set of unique competencies expected of students completing coursework in the emphasis area.

**Public Health Nutrition Emphasis Area Competencies**

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| 1 | <b>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.                  |
| 2 | <b>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.  |
| 3 | <b>Population-based health administration</b>            | Utilize advance principles of 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. |
| 4 | <b>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.   |
| 5 | <b>Effective communication</b>                           | Develop and illustrate effective strategies to communicate public health/nutrition issues to a variety of audiences.   |

**Public Health Nutrition – Required and Elective Courses**

Prerequisite courses: Students without an undergraduate degree in nutrition or dietetics or graduate work in nutrition need an understanding of human nutrition similar to that which is taught in: HN 400 Human Nutrition and HN 450 Nutritional Assessment. These courses or the equivalent must be completed before the student is approved for full admission status in the program.

| Requirements & Credit Hrs Needed |   | Select from these Courses |   |
|----------------------------------|---|---------------------------|---|
| Required courses                 | 10 hours  | FNDH 600                  | Public Health Nutrition (3 hrs) (may substitute an elective if already taken) |
|                                  |   | FNDH 844                  | Nutritional Epidemiology (3 hrs)  |
|                                  |   | FNDH 820                  | Functional Foods for Chronic Disease Prevention (3 hrs)                       |
|                                  |   | FNDH 880                  | Graduate Seminar in Human Nutrition (1 hr)                                    |
| Select 2-3 courses               | 5-8 hours   | FNDH 620                  | Nutrient Metabolism (3 hrs)   |
|                                  |   | FNDH 631                  | Clinical Nutrition I (3 hrs)  |
|                                  |   | FNDH 632                  | Clinical Nutrition II (3 hrs)   |
|                                  |   | FNDH 635                  | Nutrition and Exercise (3 hrs)  |
|                                  |   | FNDH 700                  | Global Health and Nutrition (3 hrs)   |
|                                  |   | FNDH 718                  | Physical Health and Aging (3 hrs)   |
|                                  |   | FNDH 726                  | Nutrition and Wellness (3 hrs)  |
|                                  |   | FNDH 735                  | Advanced Energy Balance (3 hrs)   |
|                                  |   | FNDH 780                  | Problems in Nutrition (variable)  |
|                                  |   | FNDH 782                  | Topics in Human Nutrition (3 hrs)   |
|                                  |   | FNDH 800                  | Nutrition Education and Communication (3 hrs)                                 |
|                                  |   | FNDH 810                  | Advanced Macronutrient Metabolism (5 hrs)                                     |
|                                  |   | FNDH 812                  | Advanced Micronutrient Metabolism (3 hrs)                                     |
|                                  |   | FNDH 841                  | Consumer Response Evaluation (3 hrs)  |
| FNDH 862                         | Maternal and Child Nutrition (3 hrs) (Great Plains Program) |                           |   |
| Select 1-3 courses               | Minimum 3 hours   | FNDH 891                  | Environmental Scanning and Analysis of Current Issues in Dietetics (3 hrs)    |
|                                  |   | FSHS 714                  | Program Design, Evaluation, and Implementation (3 hrs)                        |
|                                  |   | KIN 610                   | Program Planning and Evaluation (3 hrs)                                       |
|                                  |   | KIN 805                   | Physical Activity and Human Behavior (3 hrs)                                  |
|                                  |   | MC 750                    | Strategic Health Communication (3 hrs) (alternate years)                      |
|                                  |   | MC 760                    | Communication and Risk (3 hrs) (alternate years)                              |
|                                  |   | PSYCH 518                 | Introduction to Health Psychology (3 hrs)                                     |
|                                  |   | SOCIO 541                 | Wealth, Power and Privilege (3 hrs)   |
|                                  |   | SOCIO 570                 | Race and Ethnic Relations in the USA (3 hrs)                                  |
|                                  |   | STAT 705                  | Regression and Analysis of Variance (3 hrs)                                   |
|                                  |   | STAT 710                  | Sample Survey Methods (3 hrs)   |
|                                  |   | STAT 713                  | Applied Linear Stat Models (3 hrs) (same as STAT 705 only more mathematical)  |
|                                  |   | STAT 716                  | Non-parametric Statistics (3 hrs)   |
|                                  |   | STAT 717                  | Categorical Data Analysis (3 hrs)   |
|                                  |   | STAT 720                  | Design Experiments (3 hrs)  |
|                                  |   | STAT 725                  | Intro to SAS Computing (1 hr)   |
|                                  |   | STAT 730                  | Multivariate Statistical Methods (3 hrs)                                      |

| Competencies and Courses                                    | Required – 10 hrs |          |          |          | Select 2-4 Courses – 6-11 hrs |          |          |          |          |          |          |          |          |          |          | Select 1-3 Courses – Minimum 3 hrs |          |          |          |          |          |         |         |        |       |           |           |           |          |          |          |          |          |          |          |          |  |
|---|-------------------|----------|----------|----------|-------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------------------------------|----------|----------|----------|----------|----------|---------|---------|--------|-------|-----------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
|   | FNDH 600          | FNDH 844 | FNDH 820 | FNDH 880 | FNDH 620                      | FNDH 631 | FNDH 632 | FNDH 635 | FNDH 700 | FNDH 718 | FNDH 726 | FNDH 735 | FNDH 780 | FNDH 782 | FNDH 800 | FNDH 810                           | FNDH 812 | FNDH 841 | FNDH 862 | FNDH 891 | FSHS 714 | KIN 610 | KIN 805 | MC 750 | MC760 | PSYCH 518 | SOCIO 541 | SOCIO 570 | STAT 705 | STAT 710 | STAT 713 | STAT 716 | STAT 717 | STAT 720 | STAT 725 | STAT 730 |  |
| <b>1. Information literacy of public health nutrition</b>   | P                 | P        | P        |          |                               |          |          | R        | R        | R        | R        | R        | R        | R        |          |                                    |          |          | R        |          |          |         |         |        |       |           | R         | R         | R        |          |          |          |          |          |          |          |  |
| <b>2. Translate research into practice</b>                  | P                 | P        | P        |          |                               |          |          |          |          |          | R        | R        | R        | R        |          |                                    |          | R        |          | R        | R        | R       |         |        |       |           |           |           | R        | R        |          |          |          |          |          |          |  |
| <b>3. Population-based health administration</b>            | P                 | P        | P        |          |                               | R        | R        |          |          | R        | R        | R        | R        | R        |          |                                    |          | R        |          | R        | R        | R       |         |        |       |           |           | R         | R        | R        | R        | R        | R        | R        | R        | R        |  |
| <b>4. Integrate knowledge of human nutrition principles</b> | P                 | P        | P        | P        | R                             | R        | R        | R        | R        | R        | R        | R        | R        | R        | R        | R                                  | R        | R        |          |          |          |         | R       |        |       |           |           |           |          |          |          |          |          |          |          |          |  |
| <b>5. Effective communication</b>                           | P                 |          |          | P        |                               |          |          |          |          |          |          |          | R        | R        | R        |                                    |          |          |          |          |          |         | R       | R      | R     |           |           |           |          |          |          |          |          |          |          |          |  |

### Student Accountability for Core and Emphasis Area Competencies

Each student should submit documentation addressing how each of the MPH core competencies and emphasis area competencies were attained. This documentation must be submitted to the student’s supervisory committee members before the final presentation/defense.

### Capstone/Culminating Experience SLO

At the completion of the MPH coursework and field experience, or thesis and field experience, the student will be expected to meet the following MPH SLO:

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| <b>MPH SLO: Integration</b>  |
| Demonstrate the ability to integrate knowledge and skills to solve problems and to produce scholarly work in a culminating experience in the form of a thesis, report, and/or community-based field project. |

The capstone/culminating experience requirement for the MPH degree is typically completed at the end of the coursework so that a student may apply the knowledge gained from graduate courses. It is met with the following:

- Six credit hours of field experience with a capstone project and a written report and oral presentation of the field experience and project; or
- Six credit hours of public health research and three credit hours of field experience, each with a written report and oral presentation. The written and oral reports may be combined, if approved by the supervisory committee.
- Two credit hours for a Master’s Report and four credit hours of field experience, each with a written report and an oral presentation. The written and oral reports may be combined, if approved by the supervisory committee members.

| Requirements and Credit Hours Needed       |           | Select from these Courses |  |
|--|-----------|---------------------------|--|
| <b>Field Experience Option</b>             |           |                           |  |
| Field Experience                           | 3-6 hours | MPH 840                   | MPH Field Experience (Public Health Nutrition)<br>Note: Students may enroll in all 6 hours of field experience in one semester or split it between two semesters and enroll in 3 hours of field experience each semester |
| <b>Thesis Option with Field Experience</b> |           |                           |  |
| Thesis                                     | 6 hours   | FNDH 899                  | Master’s Research/Thesis (Public Health Nutrition)   |
| Field Experience                           | 3 hours   | MPH 840                   | MPH Field Experience (Public Health Nutrition)   |

This experience is the culmination of one’s graduate education and training that reflects not only on the student’s accomplishments, but also on the quality of the program. Field experience should include work at a public health agency or similar organization outside of the normal academic setting and should allow the student to apply the knowledge learned from the core and emphasis area courses.

If completing a thesis, the area of research should be focused on population-based health questions rather than on basic research in a laboratory. This does not preclude doing laboratory analyses of data gathered in populations of animals or humans. A thesis completed as partial fulfillment for the MPH degree must be accepted by the Graduate School, becomes a single-authored publication and contributes to the body of knowledge in public health.

### Summary

| Requirement                                     | Credit Requirement | Total                  |
|---|--------------------|------------------------|
| MPH Core Courses required by all emphasis areas | 15-17 hours        | 15-17 credit hours     |
| Public Health Nutrition emphasis area courses   | 18-22 hours        | 18-22 credit hours     |
| Field Experience or Thesis and Field Experience | 6-9 hours          | 6-9 credit hours       |
| <b>Total required for MPH degree</b>            |                    | <b>42 credit hours</b> |

All MPH graduate students must maintain a GPA of 3.0 or above in ALL graduate course work to remain in good standing in the program and to graduate with an MPH degree. Detailed information concerning this requirement may be found on the Graduate School website: <http://www.k-state.edu/grad/>