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| Rating | Course # | Course Learning Objective | Course Content/Activity | Assessment of content |
| **Evidence-based Approaches to Public Health** | | | |
| **1. Apply epidemiological methods to the breadth of settings and situations in public health practice** | | | |
|  | PH 582 (MG) | Calculate and interpret measures of disease frequency to assess the magnitude of disease in a population.  Calculate and interpret basic measures of effect used in descriptive epidemiology.  Directly and indirectly standardize epidemiological data and interpret findings.    Discuss the strengths, limitations, and use of common study designs used in analytical epidemiology, and calculate, and interpret data for each type of study.    Test for interaction and confounding and interpret/communicate findings. | The entire course is epi methods. There are problem sets embedded into the lectures, quizzes, and exams  Lectures: Models of causation; measures of disease frequency; measures of effect; direct and indirect standardization; screening and surveillance; Cis; analytical epi (f-up, ca-co); confounding; interaction | Problem sets, quizzes, exams |
|  | PH 584 (Ritchie) | Apply methods from epidemiology, toxicology, and other fields in public health to assess an environmental health problem. | Analyze current techniques and methods to develop a solution to a chosen environmental health problem as part of the team paper.  Group Discussion on the use of epidemiological data to evaluate the impact of toxins.  Course lecture on Environmental and Occupational Epidemiology  Review of epidemiologic study designs on the midterm exam study guide. | Completion of a term paper focused on a current environmental health problem.  Completion of a discussion board post on epidemiological data to assess exposure to toxic chemicals.  Completion of a midterm exam. |
|  | **2. Select quantitative and qualitative data collection methods appropriate for a given public health context** | | | |
|  | PH 591 (MG) | identify appropriate indicators and measures for various levels and types of evaluation;  design a basic evaluation plan for a variety of settings; | Lectures: Collecting credible data (sampling, data collection techniques, survey construction)  Lectures: Types of evaluation  Lectures: Designs and Internal Validity; In-class game: Am I a Threat, Bias, or Neither | Quiz 4; Case HW 4  Exam 1  Eval Report/Pres  Quiz 2; Case HW 2  Quiz 3; Case HW 3  Exam 1; Final Exam  Recommendation section of Eval Report |
|  | **3. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate** | | | |
|  | PH 520  (Farrell) |  | Course lectures (Classes 1-12):  Descriptive statistics & Inferential statistics  Assigned course reading (Chapters 1-19)  In-class Exercises: calculate and analyze (using hand calculations and SPSS) measures of central tendency and proportions, t-tests, ANOVA, chi-square, correlation, and linear and logistic regression.  Practice problems: calculate and analyze measures of central tendency and proportions, t-tests, ANOVA, chi-square, correlation | Assignments (1-5): calculate and analyze (using hand calculations and SPSS) measures of central tendency and proportions, t-tests, ANOVA, chi-square, correlation, and linear and logistic regression.  Quiz 1: calculate and analyze measures of central tendency and proportions, and t-tests  Quiz 2: calculate and analyze correlation and chi-square    Midterm Exam: calculate and analyze (using hand calculations and SPSS) measures of central tendency and proportions, t-tests, and ANOVA  Final Paper & Presentation: Identify a data source (i.e., NHANES, BRFSS, etc) to address research question and analyze the data using appropriate method based on nature of research question. |
|  | PH 591 (MG) | identify appropriate indicators and measures for various levels and types of evaluation | Lecture: Data management; in-lab example; case  Lecture: Descriptive Statistics; in-lab example; case  Lecture: Inferential Statistics; in-lab example; case  (SPSS) | Case HW 5; Case HW 6  Quiz 5; case HW 7  Evaluation Report  HWs and Eval Report require analyzing and reporting descriptive and analytical results |
|  | **4. Interpret results of data analysis for public health research, policy or practice** | | | |
|  | PH 520  (Farrell) |  | Course lectures (Classes 1-12):  Descriptive statistics & Inferential statistics  Assigned course reading (Chapters 1-19)  In-class Exercises: Interpret hand calculations and SPSS output for measures of central tendency and proportions, t-tests, ANOVA, chi-square, correlation, and linear and logistic regression in a manner that would be informative to the general population.  - Practice problems: Interpret measures of central tendency and proportions, t-tests, ANOVA, chi-square, correlation | Assignments (1-5): Interpret hand calculations and SPSS output for measures of central tendency and proportions, t-tests, ANOVA, chi-square, correlation, and linear and logistic regression.  Quiz 1: Interpret measures of central tendency and proportions, and t-tests  Quiz 2: interpret correlation and chi-square  Midterm Exam: Interpret hand calculations and SPSS output for measures of central tendency and proportions, t-tests, and ANOVA  Final Paper & Presentation: Interpret the results of the appropriate method of analysis and determine whether the stated hypothesis/es can by supported based on the data. |
|  | PH 580  (Watkins) | Analyze health problems, local, state, national and international for risk factors and consequences for public health | Public Health Project | Public Health Project: Select a current global or national public health issue. Investigate the current status of that issue including statistics and trends globally, nationally and within your state. You will also address any current policies that address the issue. Finally, you will complete this assignment with a critique of what is being done from a public health stand point and what is needed to improve or solve your selected issue.  Discussion Board: After reading Chapter 2 of your text and reviewing the PowerPoints and the document America's Health Ranking go to discussion board and discuss in your own words the outcomes of Kentucky's health status and how the disparities and determinants influence those outcomes. |
|  | PH 584 (Ritchie) | Evaluate sources of information to address a chosen environmental health issue, choose methods for addressing the problem or policy, and discuss the type of data that is needed. | Evaluate an environmental health policy and conduct research as part of the Term Paper.  Group discussion of climate change and human health. | Completion of a term paper focused on a current environmental health problem.  Completion of a discussion board post. |
|  | PH 591 (MG) | interpret evaluation findings with relevance for action and solutions | Lecture: Descriptive Statistics; in-lab example; case  Lecture: Inferential Statistics; in-lab example; case | Case HW 6; case HW 7  Evaluation Report  HWs and Eval Report require interpreting descriptive and analytical results |

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|  | **Public Health & Health Care Systems** | | | |
|  | **5. Compare the organization, structure and function of health care, public health and regulatory systems across national and international settings** | | | |
|  | PH 580  (Watkins) | Define and analyze the various components of the public health system | Discussion Board | Discussion Board: After reading Chapter 7, reviewing the PowerPoints in your own words identify strategies for improving the performance of the public health organizations and systems and describe how these could improve population health. |
|  | PH 584 (Ritchie) | Analyze the functions and regulatory authority of environmental health agencies.  Analyze the functions of environmental health practice at the local, regional, and global scales. | Class exercise with a comparative analysis of the function of environmental health agencies.  Course lectures on introduction to environmental health, sustainability and health, water quality and health, and midterm exam review lecture. | Completion of an assignment that requires a comparative analysis of environmental health agencies.  Completion of a midterm exam. |
|  | **6. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels** | | | |
|  | PH 580  (Macy) | Describe the roles of,  history, power, privilege  and structural inequality in  producing health  disparities | Unnatural Causes video series  Unnatural Causes reflection paper: Each student will write a reflection paper (double-spaced, no larger than 12 pt font) on the series. The paper should summarize the series content, detail any personal preconceptions that were confirmed or refuted after watching the videos, critique the series in terms of its relevance to public health, and detail strategies to reduce disparities and increase social justice.  Unit on Tuskegee Study of Untreated Syphilis (TSUS)  Video, “The Deadly Deception” | Unnatural Causes reflection paper: Each student will write a reflection paper (double-spaced, no larger than 12 pt font) on the series. The paper should summarize the series content, detail any personal preconceptions that were confirmed or refuted after watching the videos, critique the series in terms of its relevance to public health, and detail strategies to reduce disparities and increase social justice.  Discussion Board:  Based on the documentary and PowerPoint about the TSUS, compare and contrast both similarities and differences of the TSUS to studies conducted in developing countries (e.g. AIDS trials in Africa). Provide documentation and justification for your response from course materials |
|  | PH 580  (Watkins) | Describe interrelationships among the system's components | Discussion Board | Discussion Board: Considering the determinants of Health, how can we create a society in which everyone has a chance to live long healthy lives and in your opinion what are the major roles of Public Health to make this happen. |
|  | PH 584 (Ritchie) | Investigate the ethical, political and environmental justice issues related to a particular environmental health problem or policy. | Evaluating the social, ethical, and environmental justice aspects of an environmental health problem/policy as part of the Term Paper. | Completion of a term paper focused on a current environmental health problem. |

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|  | **Planning & Management to Promote Health** | | | |
|  | **7. Assess population needs, assets and capacities that affect communities’ health** | | | |
|  | PH 580  (Watkins) | Analyze health problems, local, state, national and international for risk factors and consequences for public health | Discussion Board | Discussion Board: After reading Chapter 4, reviewing the PowerPoints and reviewing the HHS, ASTHO, Kentucky Cabinet and BRDHD's websites discuss the flow of responsibility for the public's health for each of the agencies and in your own words, the positives and the negatives of the structure. |
|  | PH 584 (Ritchie) | Explain principles of environmental health that relate to the effects of environmental factors on a population’s health. | Review the midterm exam study guide for the importance of environmental health to communities.  Course lectures on introduction to environmental health, toxicology, and sustainability and health.  Group discussion on the need for ecosystem services.  Analyze the issue of climate change and human health in a group discussion. | Review of the study guide for the midterm exam.  Completion of the midterm exam.  Completion of a discussion board post on ecosystem services. |
|  | **8. Apply awareness of cultural values and practices to the design or implementation of public health policies or programs** | | | |
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|  | **9. Design a population-based policy, program, project or intervention** | | | |
|  | PH 580  (Watkins) | Analyze health problems, local, state, national and international for risk factors and consequences for public health | Public Health Project | Public Health Project: Select a current global or national public health issue. Investigate the current status of that issue including statistics and trends globally, nationally and within your state. Address any current policies that address the issue. Finally, you will complete this assignment with a critique of what is being done from a public health stand point and what is needed to improve or solve your selected issue. |
|  | PH 584 (Ritchie) | Evaluate sources of information to address a chosen environmental health issue, choose methods for addressing the problem or policy, and discuss the type of data that is needed. | Evaluate an environmental health policy and conduct research as part of the Term Paper. | Completion of the Term Paper. |
|  | PH 587 (MG) | Identify and apply constructs of commonly-used health-behavior theories to public health problems  Discuss steps in planning models, including role of health behavior theory therein | Case studies: Students apply theory to design intervention related to case study  Lectures: Precede-Proceed; SEM | Case studies; applied cases on exams 1 and 2 |
|  | **10. Explain basic principles and tools of budget and resource management** | | | |
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|  | **11. Select methods to evaluate public health programs** | | | |
|  | PH 580  (Watkins) | Describe and evaluate the unique characteristics of public health practice. | Discussion Board | Discussion Board: After reading the Executive Summary of the CDC's Introduction to Program Evaluation for Public Health Programs discuss the need for evaluating public health programs, what are outcome, impact and process objectives and how they contribute to program evaluation. |
|  | PH 591 (MG) | design a basic evaluation plan for a variety of settings | Lectures: Types of evaluation  Lectures: Designs and Internal Validity; In-class game: Am I a Threat, Bias, or Neither (this relates to identifying and designing valid ways of measuring impact/outcome)  In-class P-P model: Identify ways to measure process, impact, and outcome | Quiz 2; Case HW 2  Quiz 3; Case HW 3  Exam 1  Final Exam |
|  | **Policy in Public Health** | | | |
|  | **12. Discuss multiple dimensions of the policy-making process, including the roles of ethics and evidence** | | | |
|  | PH 584 (Ritchie) | Investigate the ethical, political and environmental justice issues related to a particular environmental health problem or policy. | Group discussion on the health effects of toxic exposures. | Completion of discussion board post on the health effects of toxic exposures.. |
|  | **13. Propose strategies to identify stakeholders and build coalitions and partnerships for influencing public health outcomes** | | | |
|  | PH 591 (MG) | apply fundamental concepts and principles of program evaluation | Lectures: Framework Step 1:  Engaging Stakeholders; DB post | Case Homework #1  Exam 1 |
|  | **14. Advocate for political, social or economic policies and programs that will improve health in diverse populations** | | | |
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|  | **15. Evaluate policies for their impact on public health and health equity** | | | |
|  | PH 580  (Macy) | Describe the role of law and  government in promoting and  protecting the health of the  public and identify specific functions and roles of governmental public health agencies in assuring population health | Lectures:  Chapter 4: Law, Government and Public Health  Final Paper and Presentations:  Section: Analysis of existing policies versus needed policies | Final Paper and Presentations:  Section: Analysis of existing policies versus needed policies by Briefly summarizes existing versus needed actions and compares the two |
|  | PH 584 (Ritchie) | Investigate the ethical, political and environmental justice issues related to a particular environmental health problem or policy. | Evaluation of an environmental health policy and research as part of the Term Paper. | Completion of a term paper. |
|  | **Leadership** | | | |
|  | **16. Apply principles of leadership, governance and management, which include creating a vision, empowering others, fostering collaboration and guiding decision making** | | | |
|  | PH 587 (MG) |  | Students work in autonomous groups throughout the semester | Group Case Studies |
|  | PH 591 (MG) |  | Students work in semi-autonomous teams throughout the semester | Group project |
|  | **17. Apply negotiation and mediation skills to address organizational or community challenges** | | | |
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|  | **Communication** | | | |
|  | **18. Select communication strategies for different audiences and sectors** | | | |
|  | PH 587 (MG) | Identify and apply constructs of commonly-used health-behavior theories to public health problems | Lecture: Diffusion of Innovations: DB post | Quiz; Exam 2 |
|  | PH 587  (Macy) | Apply theory when conducting needs assessments, conceptualizing and planning programs, implementing and evaluating  programs in public health | Lecture:  Social Marketing  TED Talk on Social Marketing  Social Marketing Assignment:  Students must choose a public health topic to address through a social marketing campaign. They must then justify their choice of consumer/audience (segmentation), communication channel (channel analysis), strategy, and tracking. | Assignment:  Students must choose a public health topic to address through a social marketing campaign. They must then justify their choice of consumer/audience (segmentation), communication channel (channel analysis), strategy, and tracking. Students then present to class. |
|  | **19. Communicate audience-appropriate public health content, both in writing and through oral presentation** | | | |
|  | PH 520  (Farrell) |  | Course lectures (Class 1-12): Each class is focused on demonstrating the utility of each type of descriptive and inferential statistic, and how to communicate the results in a manner that is clear to the general population. | Final Paper & Presentation: Write an academic research paper, in APA format, that addresses a specific research question. Upon completion, each student provides an oral presentation of their question and the corresponding findings. |
|  | PH 584 (Ritchie) | Discuss an environmental health topic based on research of current literature.  Demonstrate a scholarly approach to environmental health writing that uses elements of critical thinking.  Demonstrate effective oral, written, and/or computer skills for communicating with different situations and audiences. | Group discussions on various environmental health issues.  Use of appropriate prose in writing the term paper.  Development of a term paper that follows a systematic approach and contains the elements specified in the syllabus.  Use of computer tools for referencing, writing, and presenting to the term paper.  Develop essay responses to questions on the midterm exam. | Completion of discussion boards for the course.  Completion of the term paper.  Completion of the Midterm exam. |
|  | PH 587  (Macy) | Recognize the need to incorporate health behavior concepts when developing public health policies and interventions  Apply theory when conducting needs assessments, conceptualizing and planning programs, implementing and evaluating programs in public health | Lectures on health behavior theories and concepts:  Health Belief Model  Theory of Planned Behavior  Social Cognitive Theory  Diffusion Theory  Final Papers and Presentations:  Students are given a health behavior and population and they must choose a theory to apply to the given behavior and audience. | Final Papers and Presentations:  Students are given a health behavior and population and they must choose a theory to apply to the given behavior and audience |
|  | PH 591 | communicate evaluation findings and recommend actions | Lectures: Communicating results (descriptive stats, inferential stats – 2 different lectures);  Reading: Using graphs and charts  Lecture: Creating presentations | Case homework #6 & 7  Oral presentation  Evaluation Report |
|  | **20. Describe the importance of cultural competence in communicating public health content** | | | |
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|  | **Interprofessional Practice: “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).** | | | |
|  | **21. Perform effectively on interprofessional teams** | | | |
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|  | **Systems Thinking** | | | |
|  | **22. Apply systems thinking tools to a public health issue** | | | |
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