

# Department of Preventive Medicine and Public Health

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The Departments of Preventive Medicine and Public Health in Kansas City and Wichita are passionate about healthy communities and are committed to improving the health of people through teaching, research and service. Our faculty, which includes physicians, epidemiologists, social scientists, and research scientists, conduct research and work in the community to harness public health and scientific discoveries for the benefit of all of our citizens.

## TEACHING

Faculty and staff in the Departments of Preventive Medicine and Public Health are dedicated to offering degree programs to future public health practitioners as well as clinical researchers.

- Public Health Medical Education (<http://www.kumc.edu/school-of-medicine/preventive-medicine-and-public-health/education-and-training/medical-education.html>)
- Master of Public Health program (<http://mph.kumc.edu>)
- Master of Science in Clinical Research program (<http://www.kumc.edu/school-of-medicine/preventive-medicine-and-public-health/education-and-training/ms-cr.html>)

## RESEARCH

- Health Disparity/Equity Research
- Obesity, Physical Activity and Nutrition
- Tobacco Control
- Cancer Screening and Prevention
- Health Services Research
- Epidemiology and Disease Surveillance
- Community Development and Leadership

## SERVICE

Our faculty are committed to serving the public health community and serve as collaborative partners with local, state and national public health agencies. Learn more > (<http://www.kumc.edu/school-of-medicine/preventive-medicine-and-public-health/faculty-and-staff/faculty.html>)

## Courses

### PRVM 800. Principles of Epidemiology. 3 Hours.

Basic concepts of epidemiology and methods for identification of factors influencing health and disease in human populations. Considerations are centered on physical, biological, environmental, psycho-social and cultural factors in relation to infectious and non-infectious diseases; interactions between agent, host, and environmental factors as determinants of health and disease; the application of epidemiological approaches to health services; retrospective and prospective analysis of morbidity and mortality data. LEC.

### PRVM 803. Introduction to Clinical Research. 1 Hour.

The course will provide a basic and broad overview to clinical research. The student will gain an understanding of how to develop clinical research questions including protocol design and the factors that should be considered in initiating a clinical research study. This will include biostatistical considerations, the recruitment of study participants, regulatory issues, and data management, and defining measures and

instruments. Students will gain knowledge of how to define clinical research among the various institutional entities involved with clinical research at The University of Kansas Medical Center such as the Research Institute (RI), Clinical and Translational Science Unit (CTSU) and the Human Subjects Committee (HSC). Additionally, one component of the course will focus on critical appraisal of research studies, and how to present research data. It is required that you have a research idea before enrolling. Students will find more benefit from course content and exercises if it can be directly applied to their own research idea. Prerequisite: Consent of Instructor. LEC.

### PRVM 804. Community Health Assessment and Advocacy. 3 Hours.

To impact community health, students must be able to: define the problem(s) experienced by specific populations, identify stakeholders and building partnerships, co-design an intervention to address the problem(s), incorporate cultural values of the affected stakeholders in the intervention, and advocate for various programs and policies to improve health. This course guides students through each element of the community health interventions process - from defining the problem to advocating for policy. LEC.

### PRVM 805. Public Health Seminar. 1 Hour.

This course will focus on public health practice. Guest lectures from national, state, and local public health agencies will present problems and how these problems are being addressed. Topics are expected to vary somewhat from year to year, depending on the priorities of the agencies. However, topics might include such issues as smoking prevention, automobile accidents, foodborne outbreaks, cryptosporidium outbreaks, lead poisoning in children, asthma in children, sexuality transmitted diseases, diabetes, cancer control, nutrition, cardiovascular diseases, bioterrorism, legal issues and administration of public health. This course is the same as Public Health Grand Rounds. FLD.

### PRVM 806. Special Topics:. 1-4 Hours.

In-depth, individualized investigation of special problems in community health. Designed especially for students with limited background in community health. Prerequisite: Permission of instructor. RSH.

### PRVM 807. Introduction to Field Epidemiology. 3 Hours.

This course presents an overview of the methods used in epidemiologic field investigations. It provides students with a comprehensive review of the basic components of an outbreak investigation, an introduction to public health surveillance, and an overview of specific types of investigations in which a field epidemiologist might become involved, including traceback studies, environmental health assessments, noninfectious health event investigations, contact tracing, and forensic epidemiology. In addition, resources that often come into play in outbreak investigations are presented, such as public health laboratories, the incident command system, and geographic information systems. Prerequisite: PRVM 800. RSH.

### PRVM 808. Clinical and Translational Research Seminar. 1 Hour.

This seminar will present locally and nationally recognized clinicians and researchers to discuss various areas of clinical research. The course is designed to expose students to a variety of ongoing research and features speakers from a variety of disciplines including physicians, epidemiologists, biostatisticians behavioral scientists, nursing faculty, nursing students, medical students, allied health faculty and others. Prerequisite: Permission of instructor. LEC.

### PRVM 809. Introduction to Public Health. 3 Hours.

This course provides an introduction to the basic principles of public health practice, including an overview of the history, philosophy, and scope of public health in the United States and globally. It will provide an overview of the primary disciplines within public health: biostatistics, demography, environmental health sciences, epidemiology, global

health, health policy and management, social and behavioral health, and the analytical tools employed to measure public health indicators. Prerequisite: None. LEC.

**PRVM 810. Cardiovascular Disease Epidemiology. 3 Hours.**

This will be a study of Cardiovascular Disease risk factors, expression, treatment, and prevention from a population-based standpoint. Participants will gain knowledge of cardiovascular disease prevalence, incidence, risk factors, outcomes, and prevention strategies. The goal of this course is to understand major aspects of cardiovascular epidemiology and current strategies for primary and secondary prevention of major cardiovascular diseases. Attention will be given to physiologic mechanisms leading to atherosclerosis; traditional and novel coronary heart disease risk factors; prevention methodologies for cardiovascular disease, and the role of lifestyle, dietary, and genetic factors in the development of cardiac and vascular diseases. The course will be evidence- and outcomes-based, with reference to landmark studies and major publications. Relevant historical breakthroughs and current controversies in CVD will be discussed using recent publications from the lay press and peer-reviewed journals. Emphasis will be placed on coronary artery disease and its clinical manifestations. Participants will learn to critically assess public health measures undertaken to recognize, manage, and treat atherosclerotic disease processes. LEC.

**PRVM 811. Introduction to Pharmacoepidemiology. 3 Hours.**

Pharmacoepidemiology is the application of the principles of epidemiology to the study of medications and their effects of health. Evaluating a drug's effects commences when a chemical entity becomes a drug candidate, intensifies through clinical trials, and continues after products reach the market. These studies are critical for supporting the proper use of medications in terms of efficacy, effectiveness, and cost-effectiveness. This course provides a broad introduction to the principles of pharmacoepidemiology with a focus on applications in the medical literature. Prerequisite: PRVM 800. LEC.

**PRVM 812. Introduction To One Health. 2 Hours.**

"One Health" encompasses the complex interrelationships among humans and animals, humans and the environment, and animals and the environment. Incorporates original videos of leading subject matter experts and researchers, case studies, and scientific readings. It addresses zoonotic diseases (those that may be transferred between humans and animals) and environmental issues that impact human, animal, and ecosystem health. Topics include disease surveillance, the human-animal bond, the built environment, disaster response, sanitation, rural/suburban/urban interface, and food safety and security. Prerequisite: Two courses in the biological sciences. Course Format: This is an interactive online course led by the instructor. LEC.

**PRVM 813. Chronic Disease Epidemiology. 3 Hours.**

This course is required for students on the Epidemiology track but is open to other MPH students as well. It extends the methods and concepts of basic epidemiology to the prevention and control of major chronic diseases. Topics will include surveillance, risk factors, high risk populations, pathophysiology, and consequences. Students will also gain experience developing a proposal to conduct a screening, etiologic, or prevention study of selected chronic diseases. Prerequisite: PRVM 800 Principles of Epidemiology. LEC.

**PRVM 814. Health Literacy. 3 Hours.**

This is a graduate-level course designed to teach students about literacy and its implications on public health practice and research in the United States, with a focus on health literacy. Students will be introduced to the different types of literacy, including health, prose, quantitative, document, and computer, and how to evaluate them. In addition, students will learn how to lower literacy levels of health education materials for practical

application. Cultural competency in literacy will also be discussed, with a focus on culturally competent health communication and education. LEC.

**PRVM 815. Infectious Disease Epidemiology. 3 Hours.**

This course emphasizes the underlying concepts of the epidemiologic approach as it relates to infectious diseases. Students will be introduced to principles and methods of disease surveillance and outbreak investigations using case studies. Essential concepts relating to vaccine efficacy and effectiveness in preventing infectious diseases, barriers to achieving adequate vaccine coverage, and how ongoing vaccine controversies relate to the scientific literature base will be covered. The evolving public health concerns of bioterrorism and antibiotic resistance will also be addressed. Characteristics of the agent, host, and environment that influence disease transmission will be examined in the context of control strategy identification. Instruction is primarily by online learning tools, with limited short lectures. Prerequisite: PRVM 800 Principles of Epidemiology. LEC.

**PRVM 816. International Health. 3 Hours.**

This course is divided into seven sections: 1) Global health introduction, 2) Health inequalities and the socio-economic context of disease, 3) Maternal and child health, the health of special populations, 4) The spread of infectious diseases, and HIV/AIDS, malaria, TB, 5) Globalizations and emerging infectious diseases, and nutrition, 6) Environmental health, and the health of effects of environmental change, 7) Global health payers and players, and global health priorities. Prerequisite: PRVM 800 Principles of Epidemiology or permission of the department/instructor. LEC.

**PRVM 817. Gender, Race, Class, and Health. 3 Hours.**

This graduate-level course examines the intersection of gender, race, and class and its effects on individual and public health. The theoretical orientation of this course is informed by Black feminist scholarship on intersectionality: that is, the intersecting oppressions of gender, sexuality, race, class, and nation. This theory is extended to contemporary public health and social problems through an examination of applied public health studies and interventions. Students' work will be grounded in theory, but they will learn to apply theory in fieldwork-based exercises and critical analysis of public health problems. LEC.

**PRVM 818. Social and Behavioral Aspects of Public Health. 3 Hours.**

The course provides an overview of social and behavioral aspects of public health including the relevance of psychological and social factors for health, the principles of health behavior change, the application of these principles in various health domains, and an introduction to health behavior and health promotion interventions. The course begins with the rationale for studying social and behavioral aspects of health and examines select social and behavioral factors (e.g. gender, socioeconomic status, race/ethnicity) as they relate to physical well-being. The course also focuses on well-established theories of health behavior and examines the role of psychological and social factors in specific health topics (e.g. obesity, cancer, cardiovascular disease, smoking). Prerequisite: None. LEC.

**PRVM 819. An Introduction to Geographic Information Systems (GIS) for Health. 2 Hours.**

This course will provide students with an overview of Geographical Information Systems (GIS) applied in the context of health (public health, allied health and health care). Students will be introduced to GIS and health applications used locally, nationally and internationally. They will learn about pertinent data, how to visualize the data, how to design maps that represent the data, how to use spatial data, how to geocode data, and how to prepare and analyze data. Real-life examples will be used throughout the course and students will gain hands-on experience using a GIS application. Students will also be kept abreast of any new

GIS resources and trends or developments in GIS as relates to health. Prerequisite: Basic computer skills. LEC.

**PRVM 820. Introduction to Oral Public Health. 3 Hours.**

This course is a comprehensive introduction to oral public health in general as it relates to public health in general, within the context of the U.S. healthcare system. Course content includes: Basic organizational arrangements of health services in the U.S., concepts of public health and dental public health, public health problems and oral public health problems in the context of social and community factors and social determinants of health behavior, oral public health developments from a historical perspective, oral health/dental care financing and decision making; assessments of oral health status and need for care; population-based programs for oral disease prevention/health promotion, oral/dental public health research methodology and the practice of oral public health. LEC.

**PRVM 821. Research Methods in Public Health. 3 Hours.**

This is an introductory behavioral research methods, course. Students will learn about research designs, hypothesis formation, measurement, sampling, ethical issues in research, and pragmatic and research issues with evaluating behavioral interventions. Students will also learn how to critically evaluate and develop behavioral randomized clinical trials. Prerequisite: None. Social and Behavioral Aspects of Health and an Introductory statistics course are recommended but not required. LEC.

**PRVM 823. Field Experience in Community Health Education. 1-3 Hours.**

Internships with community agencies, community preceptors in areas of concentration. Prerequisite: Permission of instructor. FLD.

**PRVM 825. Child and Family Health. 3 Hours.**

Family, maternal, and child health problems will be addressed. Topics will include prenatal care (maternal health and habits); fetal growth factors, well baby care (immunizations, nutrition, growth, development, behavior); developmental disabilities; adoption; adolescence; child abuse; family as a support system; long-term medical and social outcomes of chronic illness/disability in children. Subjects are covered through lecture, discussion and field visits under the supervision of a pediatrician. Prerequisite: Permission of instructor. LEC.

**PRVM 826. Epidemiology for Advanced Nursing Practice. 3 Hours.**

Epidemiology for Advanced Nursing Practice is a 3 credit hour graduate level course designed to synthesize basic epidemiology with clinical nursing concepts. The course is a core course required for the Doctor of Nursing Practice degree in which basic concepts of epidemiology and methods for identification of factors influencing health and disease in human populations are discussed. Considerations are centered on: 1) Physical, biological psychosocial and cultural factors in relation to infectious and non-infectious diseases; 2) Interactions between agent, host, and environmental factors as determinants of health and disease; 3) Application of the epidemiologic approach to clinical nursing; and 4) Measures of disease occurrence and risk. Prerequisite: None. LEC.

**PRVM 827. Public Health Administration. 3 Hours.**

This course provides students with an overview of the core functions of public health: assessment, policy development, and assurance together with an introduction to the leadership and management skills necessary to provide leadership in public health. It uses both theoretical and practical material to develop basic administrative competencies necessary for practice in community and public health. Assignments are designed to provide practice in applying course materials. LEC.

**PRVM 828. Designing Public Health Interventions. 3 Hours.**

Framed within the context of the core public health functions, assessment, policy development, and assurance, this course provides students with

an overview of the planning process within a community setting. This course will use both theoretical and practical material to develop basic competencies in planning, implementing, and evaluating health programs; however, the predominant focus will involve the planning process and operations of a public health program. Assignments are designed to provide practice in applying course materials. LEC.

**PRVM 830. Environmental Health. 3 Hours.**

This course will include discussion of some exposures and health effects of environmental contaminants and principles of prevention. Topics include outdoor and indoor air pollution, water and wastewater pollution, solid waste disposal, insect and rodent control, food protection, chemical and physical carcinogens, ionizing radiation, injury prevention, environmental epidemiology, agricultural lung diseases, disasters, and agricultural pollution. A number of guest lecturers and field trips will be utilized. LEC.

**PRVM 832. Environmental and Occupational Epidemiology. 3 Hours.**

Epidemiological concepts applied to problems in environmental and occupational health will be discussed. This course will focus on studies of workplace and environmental exposures, exposure assessment and monitoring, hazardous exposures and adverse health effects, and approaches to prevention. Specific health effects of exposure to toxic chemical and physical agents will be discussed, as well as reading, evaluating, and interpreting epidemiologic studies. Prerequisite: PRVM 800 Principles of Epidemiology and PRVM 830 Environmental Health or permission of instructor. LEC.

**PRVM 834. Community Health Education and Promotion. 3 Hours.**

Designed to teach students the core concepts in community health education and promotion, students will be introduced to the scientific and practical knowledge necessary to develop successful research and implement programs. Students will learn models of analysis, management of health promotion in the workplace, health education diagnosis, planning, and evaluation. A variety of examples will be used, including the Centers for Disease Control model, and other commonly recognized approaches to community health promotion. Prerequisite: PRVM 818 Social and Behavioral Aspects of Public Health or permission of instructor. LEC.

**PRVM 835. Evaluation Methods in Public Health. 3 Hours.**

Principles and procedures to evaluate health promotion and disease prevention programs. Includes data collection methods, instrument scale development, measurement, and evaluation designs. Case studies of disease prevention literature on evaluation will be analyzed. Prerequisite: Permission of instructor. LEC.

**PRVM 836. Epidemiology in Aging. 3 Hours.**

An overview of the aging process, review of current knowledge of epidemiology of selected diseases, such as dementia and osteoporosis, and falls that primarily affect aging individuals. Emphasis on epidemiologic designs, methods, and issues (e.g., low response rate and measurements) that are pertinent to research on aging individuals. Prerequisite: PRVM 800, BMTR 811/PRVM 804, or permission of instructor. LEC.

**PRVM 838. Reproductive Epidemiology. 3 Hours.**

Epidemiologic concepts applied to problems in reproductive health of men and women. Critical analysis of epidemiologic studies on sociocultural, individual and pregnancy-specific risk factors to reproduction. Field trips will be used to explore methods to reduce adverse reproductive health outcomes in populations (worksites, managed care organizations, local health departments). Literature synthesis skills are used in a project focused on preventing adverse reproductive outcomes in a defined population. LEC.

**PRVM 841. Advanced Epidemiology I: Methods in Cross-Sectional and Case-Control Studies. 3 Hours.**

This course will concentrate on concepts and application of various statistical techniques in the analysis of epidemiological data. Students will be oriented toward application of SAS in data analysis and interpretation of data from cross-sectional and case-control studies. Prerequisite: Principles of Epidemiology (PRVM 800), Fundamentals of Biostatistics I (BIOS 714), and Management of Public Health Data (PRVM 875) or Statistical Computing SAS Base (BIOS 820.) LEC.

**PRVM 842. Advanced Epidemiology II: Methods in Longitudinal Studies. 3 Hours.**

This course will concentrate on concepts and application of various statistical techniques in the analysis of epidemiological data. Students will be oriented toward application of SAS in data analysis and interpretation of data from longitudinal studies and controlled clinical trials. Prerequisite: Principles of Epidemiology (PRVM 800), Fundamentals of Biostatistics I (BIOS 714), Advanced Epidemiology (PRVM 841), and Management of Public Health Data (PRVM 875) or Statistical Computing SAS Base (BIOS 820.) LEC.

**PRVM 843. Obesity and Public Health. 3 Hours.**

Obesity is becoming epidemic and pandemic throughout the world. What are the personal public health consequences of this phenomenon? Are we as focused as we should be on the effects of this growing problem? This course reviews the basic definition of obesity and defines its known personal and public health effects: including issues of bias and stigmatization. The course further examines the epidemiology, and future predicated consequences of obesity and then examines personal models of treatment followed by examination of public health efforts to date. Finally, proposed interventions and areas for research are discussed and evaluated. Students apply principles of behavioral change and communication to develop proposed public health approaches to ameliorating the obesity problem in children and adults. Prerequisite: PRVM 800: Principles of Epidemiology and PRVM 818: Social and Behavioral Aspects of Public Health, or permission of instructor. LEC.

**PRVM 845. Health, Society, and Culture. 3 Hours.**

This three-credit graduate course will help prepare students to work effectively with diverse populations, enhance-cross cultural competence, and identify and use social and culturally-competent strategies in public health research and practice. Students in this course will become competent and versed in how culture intersects with health, social determinants of health, patient education and communication, and society. Key models for understanding how health, society, and culture relate will be discussed and linked to health communication and public health practice. In addition social issues that include racism, classism, gender discrimination, and poverty will be an integral part of the course. LEC.

**PRVM 846. Health Economics. 3 Hours.**

This course is designed to explore the application of economic theories, principles and concepts to the U.S. medical care system. Students will demonstrate an understanding of: the difference between health care and medical care and the place of medical care in the economic system; the role of social values in economic principles and societal decision making; the determinants of supply and demand of medical care services with particular attention to the relationship between supplier and demand and need and demand; complements and substitutes as they apply to medical care services; the unique nature of the medical care product; the interrelatedness of markets; the principles of and demand for health insurance and its role in the demand for medical care services; the role of government in the medical care system. LEC.

**PRVM 847. Seminar in American Indian Health Disparities. 1 Hour.**

This is a graduate-level course designed to teach students about current research being done around the country to address health disparities faced by American Indian communities. Students will attend a weekly one-hour seminar on-line and will be given readings to accompany each lecture. Lectures will be done by faculty at various universities, as well as members of community organizations and/or tribes who are conducting research. Students may take the course multiple times; each seminar will be unique in terms of topics and accompanying readings, as well as lecturers. Some semesters may focus on a particular health topic for the full semester, e.g. - cancer or diabetes. This course is designed to be a seminar series that changes each time it is taught. Prerequisite: Permission of instructor. SEM.

**PRVM 849. Qualitative Methods in Public Health. 3 Hours.**

Qualitative research has diverged from its anthropology roots to become commonplace in marketing, business, clinical and public health settings. This course is focused to basic qualitative methodologies with applications in public health, health services research, health behavior, and quality improvement. This course reviews and gives real practice with strategic planning, choice of methods, logistics, and integration with quantitative methods. Students will receive hands-on experience with logistics and actual data collection using several methods. Students will present and discuss recent journal articles reporting qualitative studies in weekly "journal club" fashion. Students will present the results of their qualitative research in an oral class presentation and poster, and in an abstract submitted to a local, regional or national conference. Prerequisite: PRVM 800 or permission of instructor. LEC.

**PRVM 851. Public Health Policy and Law. 3 Hours.**

This course is designed to prepare public health leaders to live and work in a world of laws, and to play an active and effective role in policy making and analysis. Students will understand the source of national, state, and local statutes and regulations and understand the role of common law. Students will understand the policy process at the national, state, and local level, and develop skills analyzing legislation and influencing policy decisions. Students will understand the rule making process at the national and state level. LEC.

**PRVM 853. Responsible Conduct of Research. 1 Hour.**

The purpose of this course is to engage research trainees in reading about, considering, and discussing the responsible conduct of science. The course is designed as an option for meeting current federal regulations, which require that all NIH training grants provide training in the responsible conduct of research. This course provides a concise overview of key subject areas in the responsible conduct of research. It is designed to make students aware of relevant guidelines, policies and codes relating to ethical research, as well as to provide the skills for identifying and resolving ethical conflicts that may arise in research. LEC.

**PRVM 855. Seminar in Women's Health. 3 Hours.**

Seminar in Women's Health is a 3 credit elective, graduate level course focusing on gender issues that are relevant in treatment approaches to various health issues, the differing health status of minority women, the involvement of women's health to include the entire life span and areas other than reproduction, the changing implications of health care and policy and men in women's health. No prerequisite. LEC.

**PRVM 856. Community-Based Participatory Research. 3 Hours.**

This is a graduate-level course designed to teach students the basic methods of conducting and evaluating community-based participatory research (CBPR). Students will be introduced to the five phases of CBPR, including partnership formation and maintenance, community assessment and diagnosis, defining the issue, documentation and evaluation of partnerships, and feedback, interpretation, and evaluation of partnerships.

In addition, students will learn how to find funding mechanisms and journals that are appropriate for CBPR, as well as some of the key factors in writing about CBPR. Students will be introduced to a variety of examples of well-done CBPR and will learn what makes it different from other types of research done in community settings. Prerequisite: Social and Behavioral Aspects of Public Health or permission of instructor. LEC.

**PRVM 857. Motivational Interviewing in Public Health Settings. 1 Hour.**

The course is designed to introduce participants to Motivational Interviewing, its concepts, and to the subsequent skills required for helping people to change. This course will be cross-listed with DN 857. LEC.

**PRVM 858. Public Health in Film. 2 Hours.**

The Public Health in Film course will allow students the opportunity to address multiple public health issues throughout time via educational films and public health documentaries and discussion. Specific issues will include, but will not be limited to: polio, leprosy, cholera, tuberculosis, the bubonic plague, influenza, bioterrorism and natural disasters. LEC.

**PRVM 859. Tobacco and Public Health. 3 Hours.**

This course will provide an overview of tobacco as a public health problem and tobacco politics. Students will learn about the pharmacology of nicotine, the mechanisms leading to tobacco addiction and biologic factors that affect pharmacology and tobacco use such as the menstrual cycle and comorbid illnesses such as depression and others. Public health approaches to preventing tobacco use initiation will be studied, including which initiatives are most effective. State-of-the-art methods to assist smokers to quit will be reviewed, including pharmacologic interventions, counseling by health professionals and education/motivation support. Barriers to obtaining services will be explored, such as educational needs among various types of health professionals, and access to care in rural areas or among clients with certain types of health insurance. LEC.

**PRVM 860. Community Nutrition. 3 Hours.**

Comparative analysis of the demographic, geographic, and economic structure of various types of communities in Western and non-Western societies. Relationships between these compositional elements of a given community, its food and nutrition resources and services, and the nutritional status of its members. Development of alternative strategies for resource expansion and/or for delivering appropriate nutritional services to target communities. Prerequisite: Permission of instructor. LEC.

**PRVM 861. Leadership in Public Health. 3 Hours.**

This course is designed to enhance and develop leadership knowledge, skills, and competencies vital to engage stakeholders and develop change strategies, which will impact public health efforts and its workforce in Kansas. This will also be achieved by students learning about their leadership strengths, how to identify and apply leadership principles including in systems work and negotiations. These skills apply to the core functions (assessment, policy and assurance) of public health and to public health leader's role as health strategist for their organization, community, region or state. LEC.

**PRVM 862. Terrorism, Emergency Preparedness and Response. 3 Hours.**

Through lectures, tabletop exercises, and invited speakers, the course content will include the following topics: terminology and core competencies, public health infrastructure, collaboration and communication, roles and responsibilities, psychological effects of terrorism, agricultural and zoonotic bioterrorism, law enforcements and public health, epidemiology of BT diseases (including agent specific lectures), burn injuries, risk communication, Strategic National Stockpile (SNS), National Incident Management System (NIMS), public health law

as related to bioterrorism, and public health laboratory response related to bioterrorism. LEC.

**PRVM 863. Health Disparities in Public Health. 3 Hours.**

This course is designed to enhance students' understanding of the biopsychosocial factors that contribute to disparities in health and health care. This course will also review strategies developed to reduce health disparities. Prerequisite: PRVM 818 Social and Behavioral Aspects of Public Health is recommended. LEC.

**PRVM 864. Global Public Health Impact of HIV/AIDS. 3 Hours.**

Historically reviews the HIV pandemic to evaluate lessons learned in prevention and treatment of the disease and successes and failures of public policies to reduce the impact of HIV in various countries. Critically analyzes HIV prevention interventions (voluntary counseling and testing, prevention of mother-to-child transmission, promotion of safer sex practices, clean needle exchange, methadone or buprenorphine programs, treatment with antiretroviral therapy, pre- and post-exposure prophylaxis, vaccine and microbicide development) and challenges with their implementation. LEC.

**PRVM 867. Ethical Issues in Public Health. 3 Hours.**

Lectures and small group discussions explore public health ethics, social justice and autonomy as they relate to public health practice and health policy. Current issues in health policy are discussed including: the right to health and health care, bioterrorism, and health inequalities, poverty and power. Weekly small group discussions include cases on MCHP, obesity and "fat taxes," resource allocation, and disparities in infant mortality. Student evaluation is based on class participation, a small group project, and a final paper based upon a case study addressing ethical issues relevant to the student's area of public health specialization. LEC.

**PRVM 868. Biomedical Informatics Driven Clinical Research. 3 Hours.**

This course introduces students to biomedical informatics, clinical and administrative information systems and workflows, data warehousing and hypothesis generation using HERON and the i2b2 web client, programming using Structured Query Language (SQL), and developing a computable phenotype and research cohort for observational research or prospective trial eligibility based on secondary data sources centered on electronic health records. Students will also gain experience developing their cohort, an analytic ready database and files using SQLite and REDCap, conduct preliminary analysis, and prepare an abstract for submission to a clinical or informatics forum/conference. Prerequisite: PRVM 800 Principles of Epidemiology or BIOS 714 Fundamentals of Biostatistics I. LEC.

**PRVM 870. Environmental Health Law and Policy. 3 Hours.**

This is a survey course that will provide a broad, practical understanding of some important local, state, and federal environmental statutes, regulations, and case law. This course will cover the fundamentals of environmental law, examining the history, development, and current status of environmental law and federalism in the United States. Environmental Law is designed to introduce the student to a variety of important environmental challenges addressed by environmental laws and policy issues surrounding environmental problems as well as the legal complexities of environmental regulatory and administrative schemes. Prerequisite: PRVM 830 Environmental Health. LEC.

**PRVM 871. Environmental Monitoring and Exposure Assessment. 3 Hours.**

This course will examine the various techniques and analytical methods to monitor and measure environmental contamination in air, water, and soil in both indoor and outdoor environments. Students will learn to use measurement devices and instrumentation typically used to measure and analyze these environmental contaminants. They will also learn

to interpret the data and model contaminant levels in the environment and will use this data to model likely human exposures. Environmental Monitoring and Exposure Assessment is critical to the assessment of environmental hazards and identifying exposure risk to individuals and populations. The course will focus on standard sampling and analytical techniques that have been developed to assess contaminant levels, quality assurance, data analysis, pathways of exposure and the fate and transport of environmental contaminants. The course will also briefly discuss biomarkers as a tool to estimate exposure, dose or body burden, and the information they provide will be compared to and contrasted with measures of contaminant levels in the environment. Prerequisite: PRVM 830 Environmental Health. LEC.

**PRVM 872. Grant Writing. 3 Hours.**

This course combines instruction and practical exercises to move the participant step-by-step through all stages of planning programs, identifying funding sources, and writing grant proposals. Upon completion of the course, the student will have developed a quality proposal and be able to demonstrate skills in preparing grants. These will include: Development of fundable idea, Researching appropriate funding opportunities from foundations, corporations, and governmental sources; Finding grant information on the Internet; Reviewing federal grant applications, including NIH, NSF, and HRSA applications; Development of proposal elements and crafting a quality grant application; Review of certification and assurances required on grant applications; Review of evaluation and program outcome requirements on grant applications; Working with other participants in small groups to act as internal grant reviewers, responding to reviewers, and resubmitting grants. LEC.

**PRVM 873. Scientific Writing. 2 Hours.**

Includes the mechanics of how to write clearly, focusing on mechanics, structure, and style. Students will practice specific strategies for writing effectively, with in depth attention paid to how ideas are distributed through well written sentences and paragraphs. Also includes editing and revision of writing for publication and grant submission. LEC.

**PRVM 874. Toxicology and Risk Assessment. 3 Hours.**

This course will introduce students to basic toxicological concepts. Students will be provided opportunities to use these concepts to describe the underlying biochemical or physiological basis for health effects related to exposure to environmental toxicants and will practice interpreting the findings from student in the literature and critiquing studies. In the second part of the course students will learn the basic components of a health-based risk assessment and will practice applying these concepts by conducting a risk assessment. Prerequisite: PRVM 800 Principles of Epidemiology and 830 Environmental Health and one semester of college-level biology. Completion or concurrent enrollment in PRVM 832 Environmental and Occupational Epidemiology is recommended. Additional biology and chemistry courses may be helpful. LEC.

**PRVM 875. Management of Public Health Data. 3 Hours.**

A 3 credit hour graduate level course concerning basic computing skills necessary for any advanced epidemiologic or administrative quantitative methods. This course covers basics of variable and dataset creation, building, maintenance and basic descriptive (not interpretive) analysis. The course is designed to be of use to students entering a variety of research, administrative and public health settings in public health, clinical and other fields. Software covered will include SAS, SPSS, Epi Info, KIPHS, Microsoft-EXCEL and ACCESS. The course can stand alone, or prepare students for Biostatistics and Epidemiology courses. Public data presentations will be stressed to prepare students to communicate about data with the lay public. LEC.

**PRVM 876. Health Services Research Using Public Payer Data. 3 Hours.**

Several contemporary health reforms have rendered analyses of public payer data more feasible and valuable for population health, health services research, and quality improvement. The addition of an outpatient drug benefit to standard inpatient and outpatient service coverage for Medicare, for example, has stimulated a growth industry in comparative effectiveness research and expanded policy research across the health care system. Pending expansion of States' Medicaid programs under the Affordable Care Act will undoubtedly create the largest public health care insurance program in the United States. The Centers for Medicare Medicaid Services (CMS) have streamlined researchers' access to national Medicare and Medicaid populations for health services and quality improvement projects through contracts with the Research Data Center at the University of Minnesota and the Chronic Condition Warehouse. In addition, Kansas Medicaid has invested in a Data Analytic Interface that offers ready access to our state's employees, Medicaid beneficiaries, and private health insurance claims data for enterprising researchers including tremendous opportunities for state of the art, contemporary policy analyses. This is indeed an exciting and opportune time for students embarking on careers in health services, policy, and population health research. This course is designed to prepare students for real world analyses using standard public payer claims data. LEC.

**PRVM 877. Health Communication. 3 Hours.**

This course is focused on health education and promotion, especially designing and evaluating health communication programs for populations with shared risks, exposures or behaviors. Health communication theories and principles will be applied to selecting appropriate communication strategies and developing health communication plans. Students will develop an appreciation of the role of cultural context in designing health communication. Emphasis will be placed on written communication and oral presentation. LEC.

**PRVM 878. Cost-effectiveness and Decision Analysis. 3 Hours.**

This course examines techniques that are used in making clinical and management decisions when outcomes are uncertain. The course begins with a review of probabilistic decision making, then explores methods of analyzing choices with uncertain outcomes, stressing the use of decision trees and sensitivity analysis. The course examines cost minimization analysis, cost effectiveness analysis, and cost benefit analysis. (Same as HPM 872) LEC.

**PRVM 879. Budgeting and Human Resource Management. 3 Hours.**

This graduate-level course covers principles and skills for budgeting and human resource management within public health organizations. It focuses on non-profit and public settings. Budgeting topics include the principles and purposes of accounting, concepts related to finance, and financial strategic planning. Human resource management topics include job design and hiring, performance management, retention, compensation/benefits, legal issues, and termination. The focus of the course is twofold: 1) understanding the concepts behind budgeting and in gaining skills in interpreting and using financial information; 2) gaining skills in human resources management and resource development. The course is designed for people who are interested in public health administration, but should be useful to anyone with an interest in public health leadership in any setting. LEC.

**PRVM 880. Seminar in American Indian Health. 3 Hours.**

This is a graduate-level course designed to teach students about current issues in American Indian health, as well as provide a basic historic context for understanding these issues. Students will read current literature from the academic journals and will be exposed to research being done today in American Indian communities, some of which has

not yet been published. In addition, students will gain an understanding of what health disparities exist in American Indian communities and some of the reasons why they exist, including access issues and other barriers to care, from both Western and Native points of view. Students will be exposed to some of the difficulties in conducting health research in Native communities and some of the more successful techniques to overcome barriers. Prerequisite: None. LEC.

**PRVM 881. Performance Improvement in Public Health. 3 Hours.**

This course provides students with an overview of performance improvement and management integrated within the core public health functions: assessment, policy development and assurance. It uses both theoretical and practical material to develop basic competencies necessary for performance management in community and public health settings. Key topics will include assessment tools and models, continuous quality improvement, evidence-based practice, performance improvement methods (epidemiologic measurement, measures of central tendency, problem identification and analysis, control charts) and the development of team-based problem solving and resolution. Prerequisite: PRVM 800 Principles of Epidemiology, PRVM 875 Management of Public Data; PRVM 827 Public Health Administration is preferred. LEC.

**PRVM 891. Public Health Internship. 1-3 Hours.**

Students will complete a 192 hour internship in a community setting (12 hours/week for the 16 week semester) during PRVM 891 Public Health Internship. The internship is a service-learning experience for which students should consider the contribution their activities will make to the internship setting as well as activities that will be undertaken to meet the student's learning objectives. Prerequisite: MPH core and required courses. One of the MPH core courses may be taken concurrently with PRVM 891. LEC.

**PRVM 893. Public Health Capstone. 1-3 Hours.**

The public health capstone is a 192 hour (12 hours/week for the 16 week semester) culminating experience that requires students to synthesize and integrate knowledge and/or apply theories and principles learned to an area of public health. The capstone is meant to be taken at the end of the student's degree program, and is designed to give the student an opportunity to apply their skills to a variety of problems or issues in public health. The capstone should be primarily focused on addressing concentration specific competencies. While the exact activities and outcomes of the capstone will differ across concentrations all capstones, regardless of concentration, must include a written report and an oral defense. Prerequisite: All MPH core and required courses, nine of the 12 concentration credits completed, PRVM 891 Public Health Internship, last semester of enrollment. LEC.

**PRVM 899. Thesis. 1-3 Hours.**

Preparation of a formal thesis based on the research conducted on a community health problem. After the thesis has been completed, the student will be given an oral examination on the research methods and content. Prerequisite: All MS-CR core and required courses completed or in progress in the student's final semester. THE.