PHYSICAL THERAPY AND PUBLIC HEALTH

Degree Types: DPT/MPH

The combined DPT/MPH degree is available to physical therapy students in the Feinberg School of Medicine. Students in the combined degree program can earn both the DPT and MPH degrees in three years.

The program is designed for students desiring to:

- Be high-quality, public health-oriented practitioners for people and communities with potential or existing movement dysfunction
- Contribute to the knowledge base in population health through nationally recognized research
- Drive efforts to improve population health and reduce health disparities.

Students in the Dual DPT/MPH degree program complete coursework and clinical requirements to satisfy the requirements for each degree. DPT courses (https://www.feinberg.northwestern.edu/sites/pthms/our-programs/dpt/) are scheduled during the day while MPH courses (https://www.feinberg.northwestern.edu/sites/cehs/our-programs/program-in-public-health/) are offered in the evenings. Students begin MPH coursework the summer before matriculation into the DPT program and then take one or two MPH courses each term along with the regular DPT courseload. The required professional experiences for each degree coordinate so that MPH field and culminating experiences coincide and complement DPT clinical education and the synthesis research project.

Additional resources:

- Department website (https://www.feinberg.northwestern.edu/sites/pthms/)
- Program handbook(s)

Degrees Offered

- Physical Therapy and Public Health DPT/MPH (https://catalogs.northwestern.edu/tgs/physical-therapy-public-health/physical-therapy-public-health-dpt-mph/)

Learning objective(s)/Students should be able to…

- Apply public health theories to the practice of population-oriented physical therapy.
- Analyze key USA historical events and how they have shaped and influenced the intersection of population health and physical therapy.
- Understand the contribution that health systems, government, and community structures contribute to the intersection of population health and physical therapy.
- Apply public health resource management principles to the delivery of population-oriented physical therapy services.
- Identify opportunities for the integration of technological and measurement advancements into population-oriented physical therapy practice.

Physical Therapy and Public Health Courses

PUB_HLTH 301-0 Behavior, Society & Health (1 Unit)
The course analyzes the interplay of social structure, technology, culture and demography on patterns of health, illness and health behavior. The course focuses on the application of theories of behavioral change for solving health and public health problems, including stages of change, relapse prevention, social advertising and social marketing methods for use in primary care and community settings.

PUB_HLTH 302-0 Introduction to Biostatistics (1 Unit)
The course focuses on descriptive statistics, principles of exploratory data analysis, basic probability, hypothesis testing, correlation, simple linear regression, and the basics of the analysis of variance. All examples are directed towards application of these methods in the medical and health fields.

PUB_HLTH 303-0 Environmental Health Sciences (1 Unit)
The course offers a broad background introduction to the analysis of the health consequences of exposure to air, weather, food, the workplace and other special environments potentially contaminated by biologic, chemical and physical agents.

PUB_HLTH 304-0 Introduction to Epidemiology (1 Unit)
This course introduces the science of epidemiology and its uses, including measures of disease occurrence, common sources and types of data, important study designs and sources of error in epidemiologic studies.

PUB_HLTH 305-0 Programming for Statistical Analysis (1 Unit)
This an introductory course to programming for statistical analysis using SAS. Topics include data management, descriptive statistics, tests of association and reports.

PUB_HLTH 310-0 Foundations of Public Health I (0 Unit)
This three-quarter sequence is required for all MPH students during the first year of enrollment. Students earn one unit of credit, awarded in the spring quarter. The "Foundations" course focuses on knowledge acquisition and skill development essential for public health practice. Foundations uses the case-based teaching method, and covers the Council on Education for Public Health (CEPH)'s 12 required knowledge objectives for MPH education.

PUB_HLTH 311-0 Foundations of Public Health II (0 Unit)
This three-quarter sequence is required for all MPH students during the first year of enrollment. Students earn one unit of credit, awarded in the spring quarter. The "Foundations" course focuses on knowledge acquisition and skill development essential for public health practice. Foundations uses the case-based teaching method, and covers the Council on Education for Public Health (CEPH)'s 12 required knowledge objectives for MPH education.

PUB_HLTH 312-0 Foundations of Public Health III (1 Unit)
This three-quarter sequence is required for all MPH students during the first year of enrollment. Students earn one unit of credit, awarded in the spring quarter. The "Foundations" course focuses on knowledge acquisition and skill development essential for public health practice. Foundations uses the case-based teaching method, and covers the Council on Education for Public Health (CEPH)'s 12 required knowledge objectives for MPH education.

PUB_HLTH 313-0 Topics in Public Health (0.5 Unit)
This variable topics course addresses important current issues in public health.

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PUB_HLTH 316-0 Topics in Public Health (1 Unit)
This variable topics course addresses important current issues in public health.

PUB_HLTH 317-0 Seminar in Community Health Research (0 Unit)
The Seminar in Community Health Research is a weekly one-hour seminar that is required for all MPH students in the Community Health Research concentration. The student will earn one unit of credit for each year, awarded in the fall quarter. The seminar will provide students with an overview of methods, approaches and research design considerations that are relevant to design, implementation and evaluation of community health research. Many of the topics covered in this course will be discussed in greater detail in other core and elective courses within the MPH program. An emphasis will be placed on providing case examples to help illustrate key points. These case examples will highlight community health research conducted by Northwestern faculty as well as research conducted at other universities.

PUB_HLTH 318-0 Seminar in Community Health Research II (0 Unit)
The Seminar in Community Health Research is a weekly one-hour seminar that is required for all MPH students in the Community Health Research concentration. The student will earn one unit of credit for each year, awarded in the fall quarter. The seminar will provide students with an overview of methods, approaches and research design considerations that are relevant to design, implementation and evaluation of community health research. Many of the topics covered in this course will be discussed in greater detail in other core and elective courses within the MPH program. An emphasis will be placed on providing case examples to help illustrate key points. These case examples will highlight community health research conducted by Northwestern faculty as well as research conducted at other universities.

PUB_HLTH 319-0 Seminar in Community Health Research III (1 Unit)
The Seminar in Community Health Research is a weekly one-hour seminar that is required for all MPH students in the Community Health Research concentration. The student will earn one unit of credit for each year, awarded in the fall quarter. The seminar will provide students with an overview of methods, approaches and research design considerations that are relevant to design, implementation and evaluation of community health research. Many of the topics covered in this course will be discussed in greater detail in other core and elective courses within the MPH program. An emphasis will be placed on providing case examples to help illustrate key points. These case examples will highlight community health research conducted by Northwestern faculty as well as research conducted at other universities.

PUB_HLTH 320-0 Community Engaged Research (1 Unit)
This introductory course in community health considers the basic elements that determine health and asks difficult questions about why the richest and most powerful country in world history is so unhealthy? Discussion will focus on differences in communities, community health assessments, principles for effective collaboration with communities and introduction to community health research.

PUB_HLTH 323-0 Health Equity (1 Unit)
This course provides an overview of social, economic and political inequities in the United States and their impact on the health of the poor, uninsured, elderly, racial and ethnic minorities, migrants, gendered and sexual groups, rural residents, people with mental and physical disabilities and other vulnerable and socially disadvantaged populations. Past and current policies and trends in health /medical care programs and services at the local and national levels will be discussed. Students will examine social science concepts and theoretical frameworks that will expand their knowledge and skills and empower them to become agents of social change using public health models to impact individuals, families, communities and institutions. Class topics and discussions will centered on: social and income inequalities; access (or lack of) to healthcare, including preventive services and other social resources; roles of government and the legislative process; quality care; legal and ethical issues; among others. Throughout the course, discussions will center on the social determinants of health - neighborhood environments and strategies toward short and long term solutions in the elimination of health disparities and achieving health equity. Discussion about the Patient Protection and Affordable Care Act and recent Supreme Court rulings will also be integrated into many of the discussions.

PUB_HLTH 330-0 Global Tobacco: Control and Prevention (1 Unit)
The purpose of the course is to provide students with information on the health problems associated with tobacco use across the lifespan; the consequences of second- and third-hand smoke; new and promising clinical, public health and legal strategies for both prevention and cessation; and international perspectives on tobacco control. Special emphasis will be directed at tobacco use and prevention among vulnerable populations, including youth, minorities and the poor.

PUB_HLTH 350-0 Dual Degree Seminar: Topics in Public Health for the Physical Therapist (0.05-0.15 Unit)
The Topics in Public Health for the Physical Therapist seminar course sequence prepares the physical therapist/public health professional by explicitly linking and integrating physical therapy practice and public health practice. The course emphasis is to foster awareness of opportunities for the physical therapist/public health professional through discussion and analysis of public health practice and physical therapy practice. This course provides students the opportunity to interact with faculty on topics that integrate physical therapy and public health practice and policy. Goals of this course are to discuss the intersection of population health and clinical practice and the application of core skills needed for success in a physical therapist-public health career. Prerequisite: Only students in the DPT-MPH degree program are eligible to take this course.

PUB_HLTH 387-0 Seminar in Global Health I (0 Unit)
The Seminar in Global Health is a weekly one-hour three-quarter (Fall, Winter, Spring) seminar that is required for all MPH students in the Global Health concentration. The seminar will provide students with an overview of the concentration, the interdisciplinary breadth of coursework, and the field and culminating experiences. The seminar will provide opportunities for critical analysis and dialogue on major global health issues. Many of the topics covered in this course will be discussed in greater detail in other core and elective courses within the MPH program and Global Health Concentration. An emphasis will be placed on providing case examples to help illustrate key points. These case examples will highlight global health research and practice. All three courses (PUB_HLTH 387-0, PUB_HLTH 388-0, PUB_HLTH 389-0) must be successfully completed in order to earn 1 credit at the end of spring quarter.

PUB_HLTH 388-0 Seminar in Global Health II (0 Unit)
The Seminar in Global Health is a weekly one-hour three-quarter (Fall, Winter, Spring) seminar that is required for all MPH students in the Global Health concentration. The seminar will provide students with an overview of the concentration, the interdisciplinary breadth of coursework, and the field and culminating experiences. The seminar will provide opportunities for critical analysis and dialogue on major global health issues. Many of the topics covered in this course will be discussed in greater detail in other core and elective courses within the MPH program and Global Health Concentration. An emphasis will be placed on providing case examples to help illustrate key points. These case examples will highlight

global health research and practice. All three courses (PUB_HLTH 387-0, PUB_HLTH 388-0, PUB_HLTH 389-0) must be successfully completed in order to earn 1 credit at the end of Spring quarter.

PUB_HLTH 389-0 Seminar in Global Health III (1 Unit)
The Seminar in Global Health is a weekly one-hour three-quarter (Fall, Winter, Spring) seminar that is required for all MPH students in the Global Health concentration. The seminar will provide students with an overview of the concentration, the interdisciplinary breadth of coursework, and the field and culminating experiences. The seminar will provide opportunities for critical analysis and dialogue on major global health issues. Many of the topics covered in this course will be discussed in greater detail in other core and elective courses within the MPH program and Global Health Concentration. An emphasis will be placed on providing case examples to help illustrate key points. These case examples will highlight global health research and practice. All three courses (PUB_HLTH 387-0, PUB_HLTH 388-0, PUB_HLTH 389-0) must be successfully completed in order to earn 1 credit at the end of Spring quarter.

PUB_HLTH 390-0 Introduction to International Public Health (1 Unit)
Introduction to International Public Health will orient students to the biological, socio-cultural and economic influences on population-level variation in health and well-being. The continuum between health and illness will be explored, focusing on both the proximate and distal determinants of variation in health and well-being. Students will learn about key players in international health - the multilateral and bilateral donor communities, Ministries of Health, UN agencies, foundations, NGOs - and understand important shifts in donor policies towards healthcare delivery. They will be introduced to the major health problems currently affecting the developing world and alerted to the importance of employing a population-based vs. a purely clinical approach to solving these health problems.

PUB_HLTH 391-0 Global Health Care Service Delivery (1 Unit)
The course will engage students in an analysis of case studies that describe interventions to improve healthcare delivery in resource-limited settings. The cases capture various programmatic, organizational and policy-related innovations related to care delivery. Classroom discussions of these case studies will help illuminate principles and frameworks for the design of effective global health interventions. Through a focus on HIV, TB, malaria and other health conditions, these cases will allow students to carefully consider the question of how epidemiology, pathophysiology, culture, economy and politics inform the design and performance of global health programs.

PUB_HLTH 393-0 Introduction to Health and Human Rights (1 Unit)
This course, which is open to Public Health, Law and Kellogg students, examines the intersection of health and human rights at the global and national levels, in theory and in practice. Readings and discussion will focus on the following topics: the complex relationship between health and human rights; the right to health; global activism and litigation to promote health and human rights; the movement for access to medicines; sexual and reproductive health rights; and health systems in the United States. Students will work in interdisciplinary teams on a health assessment and intervention known as the Northwestern Access to Health Project. Headed by Professor Brian Citro, with assistance from Health and Human Rights Fellow Elise R. Meyer, the Access to Health Project seeks to leverage academic and community partnerships to maximize access to health in communities in the developing world and the United States.

PUB_HLTH 411-0 Assessment, Planning & Evaluation in Community Health (1 Unit)
Assessment, Planning and Evaluation are three core features of community health research. The objective of this course is to provide an overview of the fundamental and basic skills needed for conducting research with community partners related to health assessments, program planning and evaluation of public health programs. We will focus on efforts needed in working with community partners and research methodologies recommended for effectively and efficiently conducting research without interrupting the flow of community organizations. You will have an opportunity to talk with representatives from community organizations and to apply your learning to an actual community setting.

PUB_HLTH 412-0 Infection Disease Epidemiology and Prevention (1 Unit)
This course focuses on the public health tools for the surveillance, identification, control and prevention of selected infectious diseases of public health importance. Special emphasis will be focused on outbreak investigations because they provide a unique opportunity to apply many principles of public health practice, including use and interpretation of surveillance data, risk factor analysis and implementation and assessment of control measures.

PUB_HLTH 414-0 Injury and Violence Prevention (1 Unit)
This course examines injury as a public health problem and explores research methods, study design, risk factors and prevention strategies applied to problem of injuries. This general framework will be applied to the study of specific injury mechanisms.

PUB_HLTH 415-0 Disease Prevention and Health Promotion: Principles and Application (1 Unit)
This course explores the value of and barriers to disease prevention and health promotion (DP/HP), factors that influence personal health decisions, preventive interventions directed at individuals (clinical settings) and populations (community settings), strategies for using population health principles to integrate DP/HP into routine medical and Public Health practice and the organization of federal agencies that fund DP/HP activities.

PUB_HLTH 416-0 Program Evaluation (1 Unit)
This course will provide students with a comprehensive theoretical, methodological and ethical foundation for conducting public health program evaluation. Students will experience the practice aspects of evaluation including communicating and negotiating with stakeholders, conducting an evaluability assessment, developing logic models and evaluation questions, identifying appropriate data collection methods, gathering reliable and valid evaluation data that are appropriate to the selected design and analysis methods, analyzing data, reporting evaluation results, and ensuring evaluation use. The instructor will facilitate a learning and skill-building environment, drawing on personal experiences and the expertise of others in the field.

PUB_HLTH 417-0 Public Health Law: Promoting Healthy Youth Development (1 Unit)
This course examines the application of law to critical Public Health issues affecting children and youth including the constitutional and statutory foundation of Public Health law, how legislative and regulatory decisions must negotiate the balance between individual rights and public good and the principles of parens patriae and state police powers. Case studies will illustrate the basis of Public Health jurisprudence at the national level.

PUB_HLTH 418-0 Applied Practice Experience I (0 Unit)
The Applied Practice Experience (APEx) is a two course sequence, PUB_HLTH 418-0 and PUB_HLTH 419-0. Students complete this course while working at a public health service organization or faculty-supervised public health project. Students examine real-world aspects of public health practice through scholarly literature, community-based experiential learning, peer coaching, and skill-building modules.

PUB_HLTH 419-0 Applied Practice Experience II (0-0.5 Unit)
In the APEx II, students gain real-word public health practice experience by working with public health leaders to develop public health products that serve diverse communities in domestic or international settings. All MPH students are required to complete the practice experience. The Applied Practice Experience (APEx) is a two course sequence, PUB_HLTH 418-0 and PUB_HLTH 419-0. Students complete this course while working at a public health service organization or faculty-supervised public health project. Students examine real-world aspects of public health practice through scholarly literature, community-based experiential learning, peer coaching, and skill-building modules.

PUB_HLTH 420-0 Introduction to US Health Care System (1 Unit)
Course Aims: Be able to state and explain the structure, key facts and important issues pertaining to the U.S. health system. Be able to research topics for further study by becoming familiar with the relevant literature and be able to analyze problems in this sector by understanding applicable frameworks.

PUB_HLTH 421-0 Intermediate Biostatistics (1 Unit)
Intermediate Biostatistics builds upon the material learned in Introduction to Biostatistics. Specifically, the course will focus on single-outcome, multiple-predictor methods: multiple linear regression for continuous outcomes, logistic regression for binary outcomes, and the Cox proportional hazards model for time-to-event outcomes. Degree-seeking students must take either this course or PUB_HLTH 422-0.

PUB_HLTH 422-0 Intermediate Epidemiology (1 Unit)
This course covers epidemiologic methods used in observational epidemiologic studies including the design, conduct and interpretation of observational studies in human populations with a focus on analytic cross-sectional, case-control studies and cohort studies. Key issues related to statistical approaches, validity of measures of exposure and disease and sources of potential errors in interpreting epidemiologic studies will be addressed.
Prerequisites: PUB_HLTH 304-0, PUB_HLTH 302-0. Recommended: PUB_HLTH 421-0.

PUB_HLTH 425-0 Introduction to GIS and Spatial Analysis for Public Health (1 Unit)
This course is an introduction to GIS and the collection, maintenance and analysis of spatial data for health. It combines practical ArcGIS skills with study of the theory and applications of spatial data and spatial analysis in general and specifically as it relates to population health.

PUB_HLTH 430-0 Global Health Research Practicum (1 Unit)
Students will learn to design an evidence-based and culturally appropriate global health research project or program. Specifically, students will gain competence in analyzing needs and resources; developing a technically and programmatically sound causal pathway; articulating program objectives; designing relevant program components and partnerships, implementing a program, planning program monitoring and evaluation, and ensuring program sustainability.

PUB_HLTH 431-0 Basic Decision Analysis and Models of Medical Decision Making (1 Unit)
This course covers quantitative analytic techniques intended to inform decision makers at the bedside, researchers, and those involved with policy-making. Topics include probability, Bayes' theorem, sensitivity and specificity of diagnostic tests, and decision psychology, with a focus on decision analysis, utility assessment, and cost-effectiveness analysis.

PUB_HLTH 435-0 Health Services Research Design & Analysis Strategies: Technology Assessment (1 Unit)
This course is an independent study research seminar based on individual student meetings with the instructor and other faculty mentors. The course focuses on completion of a health services research or health policy paper and oral presentation, often in conjunction with MPH program Culminating Experience requirements. Papers require health services research methodological and study design skills or the conceptual and analytical skills needed for public health history or health policy analyses. Learning objectives include applying health services research methods to a public health, clinical policy or public policy problem or debate, describing factors underlying geographic or provider variations in medical practice or health outcomes, using quality measurement, quality improvement, patient safety or epidemiologic research techniques, conducting risk adjustment for evaluation of medical or behavioral health interventions, and addressing critical issues in social determinants of health or social epidemiology. Enrollment requires prior consent of the instructor.

PUB_HLTH 438-0 Survey Design & Methodology (1 Unit)
This course focuses on methodological issues regarding the design, implementation, analysis and interpretation of surveys and questionnaires in Public Health research. Various types of self-report data will be discussed, including knowledge, attitudes, behaviors and patient-reported outcomes. Issues will include formatting and layout, wording of items and response scales, multilingual translations, sampling, timing of assessments, interviewer training, participant recruitment, data analysis and respondent and staff burden.

PUB_HLTH 439-0 Qualitative Research Methods (1 Unit)
This course focuses on qualitative research design, sampling, data management, analysis and report writing. Methods covered include cognitive interviewing for survey construction, individual and group interview methodologies, participant observation, writing and using field notes, cognitive tasks such as decision modeling, domain analysis and the use of mapping techniques in qualitative research. Data analysis instruction includes thematic analyses and code development, consensus and network analyses and an overview of qualitative data management programs.

PUB_HLTH 441-0 Ethical Issues in Clinical Research (0.5 Unit)
This case-based course provides student with knowledge of the issues surrounding the ethical conduct of research including making ethical choices in the face of conflicts, and gaining a familiarity with the regulations governing human subjects research.

PUB_HLTH 444-0 Advanced Decision Analysis (1 Unit)
This course covers advanced decision-analytic methods useful in medical decision modeling. Included are the probabilistic theory of hazard rates and modeling of age-dependent mortality, Markov modeling, stochastic tree modeling, techniques for multi-way sensitivity analysis such as probabilistic sensitivity analysis and information-value analysis and software of stochastic tree modeling. Medical decision-analytic literature is reviewed and theoretical underpinnings of models are explored. A project using decision analysis software is required.

PUB_HLTH 445-0 Writing and Peer Reviewing for Scientific Publication (1 Unit)
Writing and Peer Reviewing is an intensive, hands-on, advanced course in writing for publication in biomedical journals and how to be a successful peer reviewer. The student will be expected to prepare an article, respond to two peer review cycles and at the conclusion of the course, to be ready to submit to a journal.

PUB_HLTH 446-0 LGBTQ Health (1 Unit)
This course synthesizes work in sexual and gender minority (SGM) population health research. The course will critically examine how power, social context, and social position simultaneously shape the lives and health of SGM people, explore theories that describe the mechanisms and pathways that shape SGM population health outcomes, and discuss

the ethical responsibilities of public health professionals to engage SGM individuals and community stakeholders.

PUB_HLTH 447-0 Structural Racism in Public Health (1 Unit)
This seminar examines research in which race and structural racism are considered a social determinant of health. It will explore social constructions of health and examine key theoretical frameworks and empirical data from public health. We will evaluate the ways the health system puts the wellbeing of vulnerable populations at risk and identify prevention and intervention approaches for change.

PUB_HLTH 448-0 Introduction to Maternal Child Health (1 Unit)
This course provides an introduction to the health needs of women and children and the services designed to meet these needs. It introduces the epidemiology of maternal and child health (MCH) and the evidence base for MCH programs. The course provides students with a comprehensive knowledge base with respect to federal funding and other public programs addressing MCH.

PUB_HLTH 449-0 Public Health Policy (1 Unit)
This course addresses how public policy development and analysis have an impact on the public's health. The course is designed to provide professionals with the skills for collecting, analyzing and communicating information on public health policy issues using approaches that would be useful in the policymaking arena. Students will learn what policy is; who the policymakers are in public health; who the actors are that are affected by Public Health policy; and the major influences in determining what policy gets implemented, including the science underlying policy proposals.

PUB_HLTH 490-0 Advanced Global Public Health (1 Unit)
Advanced Global Public Health will provide an in depth exploration of the current approaches to eradicating long-term social and economic inequalities in health outcomes around the world. We will begin with a review of the current state of global health, highlighting the areas of major gains since 2000, discourse on global health governance, and current trends and emerging health challenges (e.g., chronic metabolic diseases, emerging/re-emerging infectious diseases, humanitarian emergencies). We will then directly examine the diverse strategies that have been used to improve health outcomes in low- and middle-income countries. These strategies range from biomedical interventions (e.g., vaccine campaigns, nutritional supplementation) to broader, macro-level approaches such as targeted cash transfers and agricultural reform. Drawing on detailed case studies, we will explore (a) the nature and structure of global health interventions, (b) the creation of successful partnerships for sustaining health outcomes, and (c) the importance of data collection and analysis for monitoring the effectiveness of program interventions.
Prerequisite: PUB_HLTH 390-0 or GBL_HLTH 301-0.

PUB_HLTH 499-0 Independent Study (0.5-1 Unit)

PUB_HLTH 520-0 Artificial Epidemics and Changes in Human Culture (0.5 Unit)
This course provides a close examination of how human behavior affects the development and spread of so-called "artificial epidemics," primarily covering non-communicable diseases affecting adults. Diseases and conditions will be examined in order to discern the epidemiology of the disease and how cultural influences can impact both the rise of diseases as public health issues and their subsequent decline in incidence with a view toward prevention of future outbreaks. The course is designed as a "flipped classroom"; students will review materials in advance of the class session and come prepared to share and discuss the week's topic in class. Thus there is an exceptional long reading list each week and only 1 hour of classroom, rather than 90 minutes, per week in this ½ unit class.

PUB_HLTH 521-0 Artificial Epidemics and Changes in Human Culture II (0.5 Unit)
This course provides a close examination of how human behavior affects the development and spread of so-called "artificial epidemics," primarily covering non-communicable diseases affecting women and children. Diseases and conditions will be examined in order to discern the epidemiology of the disease and how cultural influences can impact both the rise of diseases as public health issues and their subsequent decline in incidence with a view toward prevention of future outbreaks. The course is designed as a "flipped classroom"; students will review materials in advance of the class session and come prepared to share and discuss the week's topic in class. Thus there is an exceptional long reading list each week and only 1 hour of classroom, rather than 90 minutes, per week in this ½ unit class.

PUB_HLTH 524-0 Cardiovascular Disease Epidemiology (1 Unit)
The course will cover selected topics in cardiovascular disease with critical analysis of the current epidemiologic literature. Students will have the opportunity to study methodological issues, contemporary findings and recommendations for future research.

PUB_HLTH 525-0 Cancer Epidemiology (1 Unit)
This course introduces concepts of cancer biology and molecular mechanisms of carcinogenesis, elaborates concepts in epidemiology to studies of cancer epidemiology, uses project-based learning to build skills needed to assess patterns of tissue-specific cancer epidemiology including risk factors and trends, and covers methods of assessing the validity of current literature and media coverage of cancer epidemiology.

PUB_HLTH 560-0 Culminating Experience (0.5-1 Unit)
Development and presentation of a culminating research or service project based on one month (or at least 200 contact hours) of fieldwork in a community agency or work on a research project of the student's choosing (with guidance from a faculty member) in consultation with an adviser or advisory committee. Student presents a seminar and submits a paper on the project.