SPH 535 DATABASES AND SAS PROGRAMMING. (3)
Students will learn how to construct and maintain databases with applications to public health. They will also learn how to program in SAS, the leading statistical analysis system. SAS skills include report writing, MACRO writing, and Programming using SAS Intranet. Lecture, two hours; laboratory, two hours per week. Prereq: STA 291 or equivalent.

SPH 601 ENVIRONMENTAL AND OCCUPATIONAL HEALTH. (4)
An overview of occupational and environmental health problems, toxicology related to the work place and other environments, industrial hygiene, safety, and other topics relevant to environmental health. Lecture, three hours; laboratory, two hours per week. Prereq: Undergraduate chemistry and biology, or permission of instructor. (Same as PM 601.)

*SPH 602 OVERVIEW OF THE HEALTH CARE DELIVERY SYSTEM. (3)
An introduction to the health care delivery system in the United States, including its composition, functioning, the interrelationships of organizations and professional groups within the system in various settings, health care terminology, and major problems and issues in the delivery of health services. Prereq: MHA/MPA program status.

*SPH 604 PUBLIC HEALTH AND DISEASE PREVENTION. (3)
This course will introduce students to issues of public health and populations health status. Principles of disease prevention and the focus on population health will be explored. The behavior of population is a major variable in health outcomes. Behavior models resulting in positive health will be introduced. Prereq: Admission to MPH program or permission of instructor.

SPH 605 EPIDEMIOLOGY. (3)
This is an initial graduate level course in the principles of epidemiology and applications in preventive medicine and environmental health. The course consists of lectures and informal discussions. Principles and methods of epidemiologic research with a focus on issues of study design and analysis will be presented. Prereq: Graduate student in good standing in the MPH program, MSPH program, or community health nursing, or consent of instructor. (Same as PM 620.)

*SPH 609 PUBLIC HEALTH PRACTICUM. (3 or 6)
The public health practicum is designed as an integrative experience in the workplace. The practicum is an opportunity to apply classroom theories and methods under the guidance of an experienced public health practitioner with faculty oversight. Prereq: Admission to MPH program or permission of instructor.

*SPH 610 INJURY EPIDEMIOLOGY AND CONTROL. (3)
The epidemiological basis for understanding the distribution and determinants for traumatic injury and poisonings including both intentional and unintentional events. Topics include sources of data, methodological approaches to studying injuries, evaluation of injury interventions and the link between epidemiology and public health policy impacting injuries. Prereq: PM 620 and/or permission of instructor.

#SPH 611 ADVANCED EPIDEMIOLOGY. (3)
This course provides specialized epidemiologic content and method designed to meet the research and practice needs of health professionals. Practice-based problem sets and hands-on computer assignments will complement this seminar-oriented course, focusing on the role of epidemiology in the prevention of disease and injury. Prereq: SPH 605 or consent of instructor. (Same as PM 621.)

#SPH 612 INFECTIOUS/EMERGING DISEASES EPIDEMIOLOGY. (3)
The theory/concepts of infectious diseases epidemiology, such as epidemic modeling expostulated through a systematic study of the more recent emerging diseases. Prereq: Enrollment in a Public Health degree program and consent of instructor.

#SPH 614 MANAGERIAL EPIDEMIOLOGY. (3)
This course applies and integrates the principles and tools of epidemiology to the decision-making process in health care management. Prereq: Enrollment in a Public Health degree program and SPH 605/PM 620, or consent of instructor.

#SPH 616 CARDIOVASCULAR DISEASE EPIDEMIOLOGY. (3)
This course is designed to study and evaluate the broad array of epidemiologic studies on cardiovascular disease and the impact on prevention policy. Prereq: Enrollment in a Public Health degree program, SPH 605/PM 620 - Introduction to Epidemiology, or consent of instructor.
#SPH 617 ENVIRONMENTAL/OCCUPATIONAL EPIDEMIOLOGY. (3)
A study of work-related and environmental exposures and hazards associated adverse health outcomes. Integrating the fields of occupational and environmental epidemiology. Prereq: Enrollment in a Public Health degree program and SPH 605/PM 620 or consent of instructor.

#SPH 618 EPIDEMIOLOGY OF AGING. (3)
This course introduces the application of epidemiologic methods to the study of older persons. Prereq: Enrollment in a Public Health degree and SPH 605/PM 620 Intro to Epidemiology and GRN 650, or consent of instructor. (Same as GRN 618.)

#SPH 630 BIOSTATISTICS II. (3)
Students will learn statistical methods used in public health studies. This includes receiver operator curves, multiple regression logistic regression, confounding and stratification, the Mantel-Haenzel procedure, and the Cox proportional hazardous model. Lecture, two hours; laboratory, two hours per week. Prereq: STA 580 or equivalent. (Same as STA 681.)

#SPH 631 DESIGN AND ANALYSIS OF HEALTH SURVEYS. (3)
Students will learn design and analysis issues associated with well-known national health surveys, including reliability and validity of measurements, instrument validation, sampling designs, weighing of responses, and multiple imputations. Students will learn how to use statistical software to analyze data from complex survey designs. Lecture, two hours; laboratory, two hours per week. Prereq: STA 580 or equivalent.

#SPH 632 MIXED MODELS IN PUBLIC HEALTH. (3)
Students will learn statistical techniques for analyzing those longitudinal studies in public health that involve repeated measures and random effects. This course will cover multilevel regression models, Poisson regression models, logistic Models with random effects, crossover experiments, and nonlinear pharmacokinetic models. Lecture, two hours; laboratory, two hours per week. Prereq: STA 580 or equivalent.

#SPH 646 SPECIAL TOPICS IN BEHAVIORAL HEALTH: (Subtitle required). (1-3)
This course will engage students in readings, projects, lectures and/or discussions to address current topics of special interest or concerns. May be repeated to a maximum of 6 credit hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 649 INDEPENDENT STUDIES IN HEALTH BEHAVIOR. (1-3)
Designed for advanced students with research or special study interest in Behavioral Health. Students are under guidance and confer individually with faculty. May be repeated to a maximum of 6 credit hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

*SPH 650 MANAGEMENT OF PUBLIC HEALTH ORGANIZATIONS. (3)
This course teaches the theories and practice of administration as they are applied in public health settings. It addresses knowledge and applications of the functions of public health management and their relationship to organizational effectiveness. Prereq: HSM/HA 601/PA 671/SPH 602 or consent of instructor.

#SPH 652 FINANCE MANAGEMENT FOR HEALTH CARE DELIVERY/PUBLIC HEALTH ORGANIZATION. (3)
This course is an overview of financial practices in public health care organizations, including government, non-profit, insurance and direct providers. Prereq: Enrollment in a Public Health degree program and SPH 602/HSM 601, or consent of instructor.

#SPH 658 PUBLIC HEALTH ECONOMICS. (3)
This course describes the role and methods of economics as applied to public health care delivery in the United States. Prereq: Enrollment in a Public Health degree program, SPH 602/HSM 601, or consent of instructor.

#SPH 661 BIOETICS FOR PUBLIC HEALTH PROFESSIONALS. (3)
This course will engage students in readings, projects, and discussions to address controversial issues of bioethics for public health professionals. Prereq: Enrollment in a Public Health degree program or consent of instructor.
#SPH 662 PUBLIC HEALTH RESPONSE TO TERRORISM, DISASTERS AND EMERGENCIES.  
This course will focus on the public health concepts, history, methods, planning, and response preparedness to weapons of mass destruction, terrorism, natural and human-made disasters, and other health emergencies. Prereq: Enrollment in a Public Health degree program and SPH 605, or consent of instructor.

#SPH 664 DESIGN AND ANALYSIS OF CLINICAL TRIALS.  
This course will introduce the fundamental concepts used in the design of Phase II IV clinical trials and statistical methodology associated with trial data analysis. Prereq: STA 570 or permission of instructor.

#SPH 665 ETHICAL ISSUES IN CLINICAL RESEARCH.  
Based on NIH guidelines for Responsible Conduct of Research, this course will present ethical and regulatory guidelines for conducting clinical research. Prereq: Participation in curriculum leading to Graduate Certificate in Clinical Research Skills, or permission of instructor.

#SPH 666 PRACTICUM IN CLINICAL RESEARCH I.  
This course for participants in the curriculum leading to the Graduate Certificate in Clinical Research Skills includes participation in a mentored research experience with the final goal of a presentation at a local program-specific retreat; attendance at monthly journal club meetings, two annual retreats, and special seminars; and completion of research reports. Prereq: Participation in curriculum leading to the Graduate Certificate in Clinical Research Skills.

#SPH 667 PRACTICUM IN CLINICAL RESEARCH II.  
Participants working toward Graduate Certificate in Clinical Research Skills earn credit for associated activities and an abstract for a national meeting. Prereq: Participation in curriculum leading to Graduate Certificate in Clinical Research Skills.

#SPH 668 PRACTICUM IN CLINICAL RESEARCH III.  
Participants working toward Graduate Certificate in Clinical Research Skills earn credit for associated activities and a journal article or funding proposal. Prereq: Participation in curriculum leading to Graduate Certificate in Clinical Research Skills.

#SPH 695 PUBLIC HEALTH PRACTICE THROUGH SERVICE LEARNING.  
This course will provide students the opportunity to gain first hand public health experience by participating in projects in a community setting, completing a project, and participating in a series of seminars. Lecture, two hours; laboratory, two hours per week. Prereq: Enrollment in a Public Health degree program and completion of the core curriculum, or consent of instructor.

#SPH 711 CHRONIC DISEASE EPIDEMIOLOGY.  
A survey course on the leading chronic diseases in the U.S., including cardiovascular disease, cancer and diabetes with focus on surveillance and risk factors. Prereq: Enrollment in a Public Health degree program, SPH 605/PM 620 Introduction to Epidemiology or consent of instructor. (Same as PM 790.)

#SPH 712 ADVANCED EPIDEMIOLOGY.  
Introduction to specialized epidemiologic content areas as well as methods designed to meet the research and practice of health professionals. Lecture, two hours; laboratory, two hours each week. Prereq: Enrollment in a Public Health degree program and SPH 605/PM 621 or consent of instructor.

#SPH 718 SPECIAL TOPICS IN EPIDEMIOLOGY: (Subtitle required).  
This course will engage in readings, projects, lectures and/or discussions to address current topics of special interest or concerns. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 719 INDEPENDENT STUDIES IN EPIDEMIOLOGY.  
Designed for advanced students with research or special study interests in Epidemiology. Students are under guidance and confer individually with faculty. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.
#SPH 728 SPECIAL TOPICS IN OCCUPATIONAL/ENVIRONMENTAL HEALTH:  
(Subtitle required). (1-3)
This course will engage students in reading, projects, lectures and/or discussions to address current topics of special interest or concerns. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 729 INDEPENDENT STUDIES IN OCCUPATIONAL/ENVIRONMENTAL HEALTH:  
(Subtitle required). (1-3)
Designed for advanced students with research or special study interest in Occupational and Environmental Health. Students are under guidance and confer individually with faculty. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 738 SPECIAL TOPICS IN BIOSTATISTICS: (Subtitle required). (1-3)
This course will engage students in readings, projects, lectures and/or discussions to address current topics of special interest or concerns. May be repeated to a maximum of 6 credit hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 739 INDEPENDENT STUDIES IN BIOSTATISTICS. (1-3)
Designed for advanced students with research or special study interest in Biostatistics. Students are under guidance and confer individually with faculty. May be repeated to a maximum of 6 credit hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 750 LEGAL BASIS OF PUBLIC HEALTH. (3)
Introductory course for non-lawyers in selected aspects of the law relating to public health. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 758 SPECIAL TOPICS IN HEALTH SERVICES MANAGEMENT: (Subtitle required). (1-3)
This course will engage students in readings, projects, lectures and/or discussions to address current topics of special interest or concerns. May be repeated to a maximum of 6 credit hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 759 INDEPENDENT STUDIES IN HEALTH SERVICES MANAGEMENT: (Subtitle required). (1-3)
Designed for advanced students with research or special study interest in Health Services Management. Students are under guidance and confer individually with faculty. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

SPH 768 RESIDENCY CREDIT FOR MASTER’S DEGREE. (1-6)
May be repeated to a maximum of 12 credits. Prereq: All course work toward the degree must be completed.

#SPH 778 SPECIAL TOPICS IN PUBLIC HEALTH: (Subtitle required). (1-3)
This course will engage in reading, projects, lectures and/or discussions to address current topics of special interest or concern in public health. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

#SPH 779 INDEPENDENT STUDIES IN PUBLIC HEALTH. (1-3)
Designed for advanced students with research or special study interests in Public Health. Students are under guidance and confer individually with faculty. May be repeated to a maximum of 6 semester hours. Prereq: Enrollment in a Public Health degree program or consent of instructor.

SPH 901 PUBLIC HEALTH DOCTORAL PROFESSIONAL COLLOQUIUM. (3)
Seminar course designed as the integrative introduction, consideration, capstone for the Doctor of Public Health (Dr.P.H.) degree. Offered each semester of enrollment. Prereq: Admission to the Dr.P.H. program.

SPH 910 TOPICS IN ADVANCED EPIDEMIOLOGY AND LABORATORY. (3)
Provides the student with an introduction to advanced epidemiologic content areas as well as methods designed to meet the research and practice needs of health professionals. Lecture, two hours; laboratory, two hours per week. Prereq: Admission to the Dr.P.H. program, completion of MPH/MSPH core or equivalent, or approval of instructor.
SPH 911 PROFESSIONAL SEMINAR IN EPIDEMIOLOGY. (3)
Professional Seminar in Epidemiology is an advanced course in one of the five content areas of public health designed as the link between academic work in epidemiology and application in Public Health practice. Prereq: Admission to the Dr.P.H. program, completion of SPH 910, or approval of instructor.

SPH 921 PROFESSIONAL SEMINAR IN ENVIRONMENTAL HEALTH. (3)
Designed as the link between academic work in environmental health and application health practice, and to prepare the student for a leadership role in public health. Prereq: Admission to the Dr.P.H. program, completion of MPH/MSPH core or equivalent, or approval of instructor.

SPH 930 ADVANCED BIOSTATISTICAL METHODS IN PUBLIC HEALTH. (3)
The study of advanced topics in biostatistics for the public health professional emphasizing concepts over methodology. Prereq: Admission to the Dr.P.H. program, completion of MPH/MSPH core or equivalent, or approval of instructor.

SPH 931 PROFESSIONAL SEMINAR IN BIOSTATISTICS. (3)
Designed as the link between academic work in biostatistics and application in public health practice; and to prepare the student for a leadership role in public health. Prereq: Admission to the Dr.P.H. program, SPH 930, or approval of instructor.

SPH 940 HEALTH-RELATED BEHAVIORS: MODELS AND APPLICATIONS. (3)
This course evaluates the use of models of health on related behavior and their applications for intervention in public health problems. Prereq: Admission to the Dr.P.H. program, completion of MPH/MSPH core or equivalent, or approval of instructor.

SPH 941 PROFESSIONAL SEMINAR IN HEALTH ENHANCEMENT. (3)
Designed as the opportunity to link academic work in health enhancement with application in public health practice and to prepare the student for a leadership role in public health. Prereq: Admission to the Dr.P.H. program, SPH 940, or approval of instructor.

SPH 950 WELL MANAGED PUBLIC HEALTH CARE ORGANIZATION. (3)
The Well Managed Public Health Care Organization is an advanced course addressing effective senior management of public and private organizations focusing upon public health. Prereq: Admission to the Dr.P.H. program, completion of MPH/MSPH core or equivalent, or approval of instructor.

SPH 951 PROFESSIONAL SEMINAR IN PUBLIC HEALTH MANAGEMENT AND PRACTICE. (3)
Designed to link academic work in public health management with application in public health practice, and to prepare the student for a leadership role in public health. Prereq: Admission to the Dr.P.H. program, SPH 950, or approval of instructor.

SPH 995 PUBLIC HEALTH PROJECT OR DISSERTATION RESEARCH. (0-12)
Public health project or dissertation research for residency credit. Prereq: Completion of the Dr.P.H. Determinative Examination.

SPH 996 DOCTORAL PUBLIC HEALTH FIELD PRACTICUM. (2-4)
Required public health field work is the integrative component of the curriculum and an opportunity to apply and test didactic learning. May be repeated twice. Laboratory, eight to sixteen hours per week. Prereq: Admission to the Dr.P.H. program, completion of MPH/MSPH core or equivalent, second year status, or approval of instructor.

SPH 998 SPECIAL TOPICS IN PUBLIC HEALTH (Subtitle required). (1-4)
Designed to address contemporary topics of significance in the field of public health as well as the study of specific topics and problems. May be repeated three times. Prereq: Admission to the Dr.P.H. program, consent of instructor.

SPH 999 DIRECTED STUDIES IN PUBLIC HEALTH. (1-4)
Study and research on contemporary and specific topics and problems of significance to the field of public health, and the interests of individual students. May be repeated to a maximum of six hours. Prereq: Admission to the Dr.P.H. program, consent of instructor.