DEPARTMENT OF HEALTH STUDIES COURSES
OFFERED BY QUARTER

Summer 2011

HSTD 30700
Clinical Epidemiology
Course Instructors: Lianne Kurina & Jerry Krishnan
Offered: 2011-12; Summer - July 7th-August 18th; T/Th 9:00-11:00am
PQ: Introductory Statistics recommended, may be taken concurrently.
ID: CCTS 45100
Clinical epidemiology is the "application of epidemiologic principles and methods to problems encountered in clinical medicine." This course introduces the basic principles of epidemiologic study design, analysis and interpretation, with a particular focus on clinical applications. The course includes lectures and discussions based on critical appraisal of significant research articles. The course is primarily intended for, but not restricted to, students with prior clinical training. Health Studies 30700 and 30900 may not both be taken for credit, either will fulfill the basic epidemiology requirement for the MSCP in Health Studies and either will serve as the epidemiology prerequisite for Health Studies 31001.

HSTD 32100
Introduction to Biostatistics
Course Instructor: Lin Chen/Hongyuan Cao
Offered: 2011-12; Summer July 5th-August 19th; T/W/Th 3:00-4:20pm
PQ: 2 quarters of precalculus (Required course for MSCP and CRTP II)
ID: CCTS 45000
This course will provide an introduction to the basic concepts of statistics as applied to the bio-medical and public health sciences. Emphasis is on the use and interpretation of statistical tools for data analysis. Topics include (i) descriptive statistics; (ii) probability and sampling; (iii) the methods of statistical inference; and (iv) an introduction to linear and logistics regression.
*In addition to the course, there is a statistical computing workshop held on Wednesdays from 10-11:30am in BSLC 018.
DEPARTMENT OF HEALTH STUDIES COURSES

Autumn 2011

HSTD 30900
Principles of Epidemiology
Course Instructor: Ben Lahey
Offered: 2011-12; Autumn; T/Th 3:00-4:20pm
PQ: Introductory statistics recommended
ID: STAT 35000, PPHA 36400, ENST 27400; BIOS 29318
Epidemiology is the study of the distribution and determinants of health and disease in human populations. This course introduces the basic principles of epidemiologic study design, analysis, and interpretation, through lectures, assignments, and critical appraisement of both classic and contemporary research articles. The course objectives include: (1) To be able to critically read and understand epidemiologic studies; (2) To be able to calculate and interpret measures of disease occurrence and measures of disease-exposure associations; and (3) To understand the contributions of epidemiology to clinical research, medicine and public health.

HSTD 32400
Applied Regression Analysis
Course Instructor: Lin Chen
Offered: 2011-12; Autumn; T/Th 12:00-1:20pm
PQ: HSTD 32100; STAT 22000 or equivalent
ID: STAT 22400 (Primary)
This course is an introduction to the methods and applications of fitting and interpreting multiple regression models. The main emphasis is on the method of least squares. Topics include the examination of residuals, the transformation of data, strategies and criteria for the selection of a regression equation, the use of dummy variables, tests of fit. Stata computer package will be used extensively, but previous familiarity with Stata is not assumed. The techniques discussed will be illustrated by real examples involving biological and social science data.

HSTD 33300
Applied Longitudinal Data Analysis
Course Instructor: Ron Thisted
Offered: 2011-12; Autumn; T/TH 9:00-10:20am
PQ: HSTD 32400/STAT 22400 or equivalent, and HSTD 32600/STAT 22600 or HSTD 32700/STAT 22700 or equivalent; or consent of instructor.
ID: STAT 36900
Longitudinal data consist of multiple measures over time on a sample of individuals. This type of data occurs extensively in both observational and experimental biomedical and public health studies, as well as in studies in sociology and applied economics. This course will provide an introduction to the principles and methods for the analysis of longitudinal data. Whereas some supporting statistical theory will be given, emphasis will be on data analysis and interpretation of models for longitudinal data. Problems will be motivated by applications in epidemiology, clinical medicine, health services research, and disease natural history studies.

HSTD 37100
Cost Effectiveness Analysis
Course Instructor: Willard Manning
Offered: 2011-2012; Autumn; M/W 10:30-11:50am
PQ: Some microeconomics previous to this course OR the consent of instructor.
ID: PPHA 38200 (Primary)
Cost Effectiveness Analysis (CEA) and Cost Utility Analysis (CUA) are widely used for the economic evaluation of health and medical treatments. Emphasis will be on understanding the basic foundations of CEA/CUA and the implications for the components in the evaluation. The course will address the measurement of health and medical effectiveness, health care and societal costs, and their integration into a formal assessment of alternative treatments. Applications from the literature will be used. By the end of the course, students are expected to be able to critique methods used in published papers.
HSTD 31001  
Epidemiologic Methods  
Course Instructor: Lianne Kurina  
Offered: 2011-12; Winter; T/Th 9:00-10:20am  
PQ: HSTD 30700 or HSTD 30900 and HSTD 32400/applied statistics courses through multivariate regression or consent of instructor  
ID: STAT 35700  
This course expands on the material presented in "Principles of Epidemiology," further exploring issues in the conduct of epidemiologic studies. The student will learn the application of both stratified and multivariate methods to the analysis of epidemiologic data. The final project will be to write the "specific aims" and "methods" sections of a research proposal on a topic of the student's choice.

HSTD 32600  
Analysis of Categorical Data  
Course Instructor: Mei Wang  
Offered: 2011-2012; Winter; T/Th 1:30-2:50pm  
PQ: HSTD 32100; STAT 22000; or consent of instructor.  
ID: STAT 22600 (Primary)  
The course is intended to provide students who already have some experience with linear regression with tools for analyzing data, which are largely categorical (rather than continuous measurements). Such data often arise in epidemiology, medicine, demography, sociology, and other social sciences. The course emphasizes good data analysis practice and use of appropriate statistical methods, rather than focusing on statistical theory.* A strong emphasis is placed on both computational aspects of data analysis and on clear interpretation and presentation of results.  
*Students interested in a more theoretical course should consider STAT 34700.

HSTD 32700  
Biostatistical Methods  
Course Instructor: Hongyuan Cao  
Offered: 2011-12; Winter; T/Th 10:30-11:50am  
PQ: HSTD 32400/STAT 22400; or STAT 24500; or equivalent; or consent of instructor  
ID: STAT 22700  
This course is designed to provide students with tools for analyzing categorical, count and time-to-event data frequently encountered in medicine, public health and related biological and social sciences. The course will emphasize application of the methodology rather than statistical theory, including recognition of the appropriate methods, interpretation and presentation of results. Methods covered include: contingency table analysis, Kaplan-Meier survival analysis, Cox proportional-hazards survival analysis, logistic regression, Poisson regression.

HSTD 45610  
Policy Analysis Methods and Applications  
Course Instructor: Harold Pollack  
Offered: 2011-2012; Winter; T 1:30-4:20pm  
PQ:  
ID: SSAD 45600 (Primary); PPHA 40101  
This course examines the intellectual bases and analytic tools for the professional practice of policy analysis, with an emphasis on economic policy analysis in the form of cost-benefit analysis, decision analysis, and cost-effectiveness analysis. Many examples will be drawn from medicine and public health, which offer particularly clear application of the basic methods. However we will also draw upon examples and challenges from environmental policy, criminal justice, transportation, and welfare policy.

Topics to be covered will include cost-benefit analysis, decision analysis, quality of life and cost measurement, model development and parameter estimation, and cost-effectiveness methods. Students will have weekly problem sets and instruction in a computer lab that will provide them with hands on experience performing decision analysis and cost-
effectiveness analyses. Students taking this course will be prepared to take Advanced Applications of Cost-Effectiveness Analysis, which provides doctoral-level training in this area.
DEPARTMENT OF HEALTH STUDIES COURSES

Spring 2012

HSTD 30040 – NEW COURSE
Developing Health: Transitions in Global Health & Development
Course Instructor: Josh Garoon
Offered: 2011-2012; Spring; T/Th 10:30-11:50am
PQ: Graduate student standing or consent of instructor.
ID:
This course examines the critical and changing relationships between global health and development, drawing on key concepts from public health and employing concrete examples from around the world. Improvements in public health have frequently been attributed to achievements in economic development, yet questions of exactly how development might lead to better health outcomes remain as open as they are crucial. We will use health transition theory as a point of departure for interdisciplinary investigations of key historical and contemporary attempts to describe and predict the linkages between global health and development, and how they inform public health research and practice.

HSTD 31831 – NEW COURSE
Genetic & Molecular Epidemiology
Course Instructor: Brandon Pierce
Offered: 2011-2012; Spring; T/Th 9:00-10:20am
PQ: HSTD 30700 or HSTD 30900 (or introductory epidemiology) AND HGEN 47000 or consent of instructor.
ID:
This course is designed for students with strong research interests related to identifying and characterizing the role of genetic and molecular features in human disease. Students will be introduced to the key concepts and methodological issues encountered in epidemiological studies that utilize genetic and molecular data. This course will train students on the theoretical and practical aspects of study design and data generation, and also provide the relevant hands-on training for quality control, management, and analysis of large-scale genomic/molecular data. Students are expected to have taken prior coursework in epidemiology, biostatistics, and genetics.

HSTD 32901
Introduction to Clinical Trials
Course Instructor: James Dignam
Offered: 2011-2012; Spring; T/Th 3:00-4:20pm
PQ: HSTD 32100; STAT 22000; introductory statistics; or consent of instructor
ID: STAT 35201
This course will review major components of clinical trial conduct, including the formulation of clinical hypotheses and study endpoints, trial design, development of the research protocol, trial progress monitoring, analysis, and the summary and reporting of results. Other aspects of clinical trials to be discussed include ethical and regulatory issues in human subjects research, data quality control, meta-analytic overviews and consensus in treatment strategy resulting from clinical trials, and the broader impact of clinical trials on public health.

HSTD 33500 – NEW COURSE
Statistical Applications
Course Instructor: Robert Gibbons
Offered: 2011-2012; Spring; T/Th 12:00-1:20pm
PQ: HSTD 32700/STAT 22700 or STAT 34700 or consent of instructor.
ID: STAT 35800
This course provides a transition between statistical theory and practice. The course will cover statistical applications in medicine, mental health, environmental science, analytical chemistry, and public policy. Lectures are oriented around specific examples from a variety of content areas. Opportunities for the class to work on interesting applied problems presented by U of C faculty will be provided. Although an overview of relevant statistical theory will be presented, emphasis is on the development of statistical solutions to interesting applied problems.
HSTD 35100  
Health Services Research Methods  
Course Instructor: Tamara Konetzka  
Offered: 2011-2012; Spring; M/W 1:30-2:50pm  
PQ: At least one course in linear regression and basic familiarity with STATA; or consent of instructor.  
ID: PPHA 38010; SSAD 46300  
The purpose of this course is to better acquaint students with the methodological issues of research design and data analysis widely used in empirical health services research. To deal with these methods, the course will use a combination of readings, lectures, problem sets (using STATA), and discussion of applications. The course assumes that students have had a prior course in statistics, including the use of linear regression methods.

HSTD 35410  
The Health Services System  
Course Instructor: Fabrice Smieliauskas & Jesse Peterson Hall  
Offered: 2011-2012; Spring; W 5:30-8:20pm  
PQ: GPHAP requirement: Non-GPHAP students with permission of instructor  
ID: SSAD 47500 (Primary); PPHA 46100  
This course provides an intensive overview of health services finance, economics, organization, and policy for students in health administration. The course also focuses on applied problems of health services management and policy, drawing on theory and concepts developed in core courses. The course is required for all students in the Graduate Program in Health Administration and Policy.

HSTD 40500  
Advanced Epidemiologic Methods  
Course Instructor: Dezheng Huo  
Offered: 2011-2012; Spring; T/Th 1:30-2:50pm  
PQ: HSTD 31001  
This course examines some features of study design, but is primarily focused on analytic issues encountered in epidemiologic research. The objective of this course is to enable students to conduct thoughtful analysis of epidemiologic and other population research data. Concepts and methods that will be covered include: matching, sampling, conditional logistic regression, survival analysis, ordinal and polytomous logistic regressions, multiple imputation, and screening and diagnostic test evaluation. The course follows in sequence the material presented in “Epidemiologic Methods.”
HSTD 30030
Introduction to Global Health
Course Instructor: John Schneider
Offered: TBD
PQ: Open to advanced undergraduates and graduate students
ID: CCTS 43000 (Primary)
Introduction to Global Health provides an overview of global health from the historical perspective to the current state of global health. The course will feature weekly guest lecturers with a broad range of expertise in the field: topics will include the social and economic determinants of health, the economics of global health, global burden of disease, and globalization of health risks, as well as the importance of ethics, human rights and diplomacy in promoting a healthier world. Introduction to Global Health is designed for graduate-level students and senior undergraduates with an interest in global health work in resource-limited settings.

HSTD 30040
Developing Health: Transitions in Global Health & Development
Course Instructor: Josh Garoon
Offered: 2011-2012; Spring; T/Th 10:30-11:50am
PQ: Graduate student standing or consent of instructor.
ID: This course examines the critical and changing relationships between global health and development, drawing on key concepts from public health and employing concrete examples from around the world. Improvements in public health have frequently been attributed to achievements in economic development, yet questions of exactly how development might lead to better health outcomes remain as open as they are crucial. We will use health transition theory as a point of departure for interdisciplinary investigations of key historical and contemporary attempts to describe and predict the linkages between global health and development, and how they inform public health research and practice.

HSTD 30500
Issues in Women’s Health
Course Instructor: Lianne Kurina
Offered: 2010-2011 (Alternates)
PQ: BIOS 29317; GNDR 29302; GNDR 30500
The course will focus on important sources of morbidity and mortality in women, such as heart disease, breast cancer, depression, eating disorders, and HIV. In addition to learning about the etiology, biology, and epidemiology of these conditions, we will explore related social, historical, political and cultural issues. The course will be comprised of presentations by the instructor, guest lectures by clinical experts in the condition of interest, and student-led discussions of readings.

HSTD 30700
Clinical Epidemiology
Course Instructors: Lianne Kurina & Jerry Krishnan
Offered: 2011-2012; Summer - July 6th - August 20th; T/Th 9:00-11:00am
PQ: Introductory Statistics recommended, may be taken concurrently.
ID: CCTS 45100
Clinical epidemiology is the “application of epidemiologic principles and methods to problems encountered in clinical medicine.” This course introduces the basic principles of epidemiologic study design, analysis and interpretation, with a particular focus on clinical applications. The course includes lectures and discussions based on critical appraisal of significant research articles. The course is primarily intended for, but not restricted to, students with prior clinical training. Health Studies 30700 and 30900 may not both be taken for credit, either will fulfill the basic epidemiology requirement for the MSCP in Health Studies and either will serve as the epidemiology prerequisite for Health Studies 31001.
HSTD 30900
Principles of Epidemiology
Course Instructor: Ben Lahey
Offered: 2011-2012; Autumn; T/Th 3:00-4:20pm
PQ: Introductory statistics recommended
ID: STAT 35000, PPHA 36400, ENST 27400; BIOS 29318

Epidemiology is the study of the distribution and determinants of health and disease in human populations. This course introduces the basic principles of epidemiologic study design, analysis, and interpretation, through lectures, assignments, and critical appraisal of both classic and contemporary research articles. The course objectives include: (1) To be able to critically read and understand epidemiologic studies; (2) To be able to calculate and interpret measures of disease occurrence and measures of disease-exposure associations; and (3) To understand the contributions of epidemiology to clinical research, medicine and public health.

HSTD 31001
Epidemiologic Methods
Course Instructor: Lianne Kurina
Offered: 2011-2012; Winter; T/Th 9:00-10:20am
PQ: HSTD 30700 or HSTD 30900 and HSTD 32400/applied statistics courses through multivariate regression or consent of instructor
ID: STAT 35700

This course expands on the material presented in "Principles of Epidemiology," further exploring issues in the conduct of epidemiologic studies. The student will learn the application of both stratified and multivariate methods to the analysis of epidemiologic data. The final project will be to write the "specific aims" and "methods" sections of a research proposal on a topic of the student's choice.

HSTD 31200
Cancer Epidemiology
Course Instructor: Brian Chiu
Offered: 2010-2011; (Alternates)
PQ: HSTD 30700 or HSTD 30900

The purpose of this course is to review the basic concepts and issues relevant to cancer epidemiology. Specifically, this course will focus on interpreting cancer statistics, and describing the current state of knowledge regarding the etiology and risk factors for the major cancer sites. In addition, issues in research design and interpretation within the context of cancer epidemiology, as well as the molecular and cellular basis of carcinogenesis as it pertains to cancer occurrence in populations will be discussed. The course is appropriate for students who have an introductory knowledge of epidemiology. Previous study of cancer biology is helpful but not required.

HSTD 31300
Local and Global Approaches to Infectious Disease Epidemiology
Course Instructor: Michael David & John Schneider
Offered: 2010-2011; (Alternates)
PQ: HSTD 30700 or 30900 or introductory epidemiology or consent of instructor
ID: CCTS 43200

This intermediate-level epidemiology course will provide an up to date perspective on forgotten, contemporary and emerging infections. The course lectures and readings will provide a rigorous examination of the interactions among pathogens, hosts and the environment that result in disease in diverse populations. In addition to the demographic characteristics and the behaviors of individuals that are associated with a high risk of infection, we will examine complex aspects of the environment as they pertain to disease transmission. These include poverty, globalization, social networks, public health, and racial and ethnic disparities. Additionally, we will discuss examples of the use of molecular epidemiology that demonstrate the changing characteristics of certain pathogens. Local and global approaches will be applied to case studies from the United States, Asia and Africa. The epidemiology of human immunodeficiency virus (and other sexually transmitted infections), tuberculosis, malaria, methicillin-resistant Staphylococcus aureus (MRSA), leprosy and influenza, among others, will be addressed.
HSTD 31400
Social Epidemiology
Course Instructor: Diane Lauderdale
Offered: TBD (Alternates)
Requirements: A course in epidemiology, demography, medical sociology or the equivalent, and familiarity with multivariate statistical methods.
This course will examine research that has sought to understand how social factors influence health. We will survey and evaluate different types of measurements used in social epidemiology (such as measurements of socioeconomic status, race, ethnicity, stress, social support and neighborhood characteristics), types of study designs, and debates and theories in the literature. A prior course in epidemiology or closely related field (such as demography or medical sociology) is highly desirable. Familiarity with the statistical methods used in the literature we will be reading, in particular multivariate regression analysis, is necessary.

HSTD 31510
Critical Readings in Epidemiology
Course Instructor: Epi Faculty
Offered: TBD (Alternates)
Requirements: HSTD 30700 or HSTD 30900
Course consists of reading and critiquing important and innovative recent papers in epidemiology. Each week, there will be a different substantive or disease focus for the papers. Research areas covered will be primarily, but not exclusively, in noninfectious diseases. Different faculty will lead the discussion each week and students will prepare and present summary critiques of the articles.

HSTD 31800
Epidemiology of Mental Health
Course Instructor: Ben Lahey
Offered: TBD
The course will use a lecture format, but with some seminar elements. Most class time will be devoted to lecture and discussion, but each student will briefly present an overview of one significant article and lead the discussion of that paper. Students will be evaluated using a mid-term and a final written examination. Students may negotiate to replace one examination with a written paper under some circumstances.

HSTD 31831
Genetic & Molecular Epidemiology
Course Instructor: Brandon Pierce
Offered: 2011-2012; Spring; T/Th 9:00-10:20am
Requirements: HSTD 30700 or HSTD 30900 (or introductory epidemiology) AND HGEN 47000 or consent of instructor.
This course is designed for students with strong research interests related to identifying and characterizing the role of genetic and molecular features in human disease. Students will be introduced to the key concepts and methodological issues encountered in epidemiological studies that utilize genetic and molecular data. This course will train students on the theoretical and practical aspects of study design and data generation, and also provide the relevant hands-on training for quality control, management, and analysis of large-scale genomic/molecular data. Students are expected to have taken prior coursework in epidemiology, biostatistics, and genetics.

HSTD 32100
Introduction to Biostatistics
Course Instructor: Hongyuan Cao & Lin Chen
Offered: 2011-2012; Summer July 5th-August 19th; T/W/Th 3:00-4:20pm
Requirements: 2 quarters of precalculus (Required course for MSCP; recommended course for CRTP)
This course will provide an introduction to the basic concepts of statistics as applied to the bio-medical and public health sciences. Emphasis is on the use and interpretation of statistical tools for data analysis. Topics include (i) descriptive statistics; (ii) probability and sampling; (iii) the methods of statistical inference; and (iv) an introduction to linear and logistic regression.
*In addition to the course, there is a statistical computing workshop held on Wednesdays from 10-11:30am in BSOC 018.*
HSTD 32400
Applied Regression Analysis
Course Instructor: Lin Chen
Offered: 2011-12; Autumn; T/Th 12:00-1:20pm
PQ: HSTD 32100; STAT 22000 or equivalent
ID: STAT 22400 (Primary)
This course is an introduction to the methods and applications of fitting and interpreting multiple regression models. The main emphasis is on the method of least squares. Topics include the examination of residuals, the transformation of data, strategies and criteria for the selection of a regression equation, the use of dummy variables, tests of fit. Stata computer package will be used extensively, but previous familiarity with Stata is not assumed. The techniques discussed will be illustrated by real examples involving biological and social science data.

HSTD 32600
Analysis of Categorical Data
Course Instructor: Mei Wang
Offered: 2011-2012; Winter; T/Th 1:30-2:50pm
PQ: HSTD 32100; STAT 22000; or consent of instructor.
ID: STAT 22600 (Primary)
The course is intended to provide students who already have some experience with linear regression with tools for analyzing data, which are largely categorical (rather than continuous measurements). Such data often arise in epidemiology, medicine, demography, sociology, and other social sciences. The course emphasizes good data analysis practice and use of appropriate statistical methods, rather than focusing on statistical theory.* A strong emphasis is placed on both computational aspects of data analysis and on clear interpretation and presentation of results.
*Students interested in a more theoretical course should consider STAT 34700.

HSTD 32700
Biostatistical Methods
Course Instructor: Hongyuan Cao
Offered: 2011-2012; Winter; T/Th 10:30-11:50am
PQ: HSTD 32400/STAT 22400; or STAT 24500; or equivalent; or consent of instructor
ID: STAT 22700
This course is designed to provide students with tools for analyzing categorical, count and time-to-event data frequently encountered in medicine, public health and related biological and social sciences. The course will emphasize application of the methodology rather than statistical theory, including recognition of the appropriate methods, interpretation and presentation of results. Methods covered include: contingency table analysis, Kaplan-Meier survival analysis, Cox proportional-hazards survival analysis, logistic regression, Poisson regression.

HSTD 32901
Introduction to Clinical Trials
Course Instructor: James Dignam
Offered: 2011-2012; Spring; T/Th 3:00-4:20pm
PQ: HSTD 32100; STAT 22000; introductory statistics; or consent of instructor
ID: STAT 35201
This course will review major components of clinical trial conduct, including the formulation of clinical hypotheses and study endpoints, trial design, development of the research protocol, trial progress monitoring, analysis, and the summary and reporting of results. Other aspects of clinical trials to be discussed include ethical and regulatory issues in human subjects research, data quality control, meta-analytic overviews and consensus in treatment strategy resulting from clinical trials, and the broader impact of clinical trials on public health.
HSTD 33100
Applied Survival Analysis
Course Instructor: James Dignam
Offered: 2010-2011; (Alternates)
PQ: HSTD 32100; STAT 22000; or equivalent, and HSTD 32400/STAT 22400 or equivalent; or consent of instructor.
ID: STAT 35600
This course will provide an introduction to the principles and methods for the analysis of time-to-event data. This type of data occurs extensively in both observational and experimental biomedical and public health studies, as well as in industrial applications. While some theoretical statistical detail is given (at the level appropriate for a Master's student in statistics), the primary focus will be on data analysis. Problems will be motivated from an epidemiologic and clinical perspective, concentrating on the analysis of cohort data and time-to-event data from controlled clinical trials.

HSTD 33300
Applied Longitudinal Data Analysis
Course Instructor: Ron Thisted
Offered: 2011-2012; Autumn; T/TH 9:00-10:20am
PQ: HSTD 32400/STAT 22400 or equivalent, and HSTD 32600/STAT 22600 or HSTD 32700/STAT 22700 or equivalent; or consent of instructor.
ID: STAT 36900
Longitudinal data consist of multiple measures over time on a sample of individuals. This type of data occurs extensively in both observational and experimental biomedical and public health studies, as well as in studies in sociology and applied economics. This course will provide an introduction to the principles and methods for the analysis of longitudinal data. Whereas some supporting statistical theory will be given, emphasis will be on data analysis and interpretation of models for longitudinal data. Problems will be motivated by applications in epidemiology, clinical medicine, health services research, and disease natural history studies.

HSTD 33500
Statistical Applications
Course Instructor: Robert Gibbons
Offered: 2011-2012; Spring; M/W 3:00-4:20pm
PQ: HSTD 32700/STAT 22700 or STAT 34700 or consent of instructor.
ID: STAT 35800
This course provides a transition between statistical theory and practice. The course will cover statistical applications in medicine, mental health, environmental science, analytical chemistry, and public policy. Lectures are oriented around specific examples from a variety of content areas. Opportunities for the class to work on interesting applied problems presented by U of C faculty will be provided. Although an overview of relevant statistical theory will be presented, emphasis is on the development of statistical solutions to interesting applied problems.

HSTD 35100
Health Services Research Methods
Course Instructor: Tamara Konetzka
Offered: 2011-2012; Spring; M/W 1:30-2:50pm
PQ: At least one course in linear regression and basic familiarity with STATA; or consent of instructor.
ID: PPHA 38010; SSAD 46300
The purpose of this course is to better acquaint students with the methodological issues of research design and data analysis widely used in empirical health services research. To deal with these methods, the course will use a combination of readings, lectures, problem sets (using STATA), and discussion of applications. The course assumes that students have had a prior course in statistics, including the use of linear regression methods.
HSTD 35301
Aging and Health Policy
Course Instructor: Tamara Konetzka
Offered: TBD
PQ: Graduate standing or consent of instructor.
ID: PPHA 42401; SSAD 49022
This course is a seminar in aging and health policy and the relationships between policy, financing, access to care, and quality of care for the elderly. The focus is on health care systems and policy as opposed to demography and biological aspects of aging. Specific topics include Medicaid and Medicare policy; long-term care insurance and financing; workforce issues; dementia and end-of-life care; the culture change movement; work and retirement as it relates to health policy; and cross-national comparisons of health policy toward the elderly. Students will engage in an ongoing discussion of policy options and learn to evaluate their potential to improve quality and ensure access for the elderly to health care and long-term care.

HSTD 35410
The Health Services System
Course Instructor: Fabrice Smieliauskas & Jesse Peterson Hall
Offered: 2011-2012; Spring; W 5:30-8:20pm
PQ: GPHAP requirement: Non-GPHAP students with permission of instructor
ID: SSAD 47500 (Primary); PPHA 46100
This course provides an intensive overview of health services finance, economics, organization, and policy for students in health administration. The course also focuses on applied problems of health services management and policy, drawing on theory and concepts developed in core courses. The course is required for all students in the Graduate Program in Health Administration and Policy.

HSTD 37100
Cost Effectiveness Analysis
Course Instructor: Willard Manning
Offered: 2011-2012; Autumn; M/W 10:30-11:50am
PQ: Some microeconomics previous to this course OR the consent of instructor.
ID: PPHA 38200
Cost Effectiveness Analysis (CEA) and Cost Utility Analysis (CUA) are widely used for the economic evaluation of health and medical treatments. Emphasis will be on understanding the basic foundations of CEA/CUA and the implications for the components in the evaluation. The course will address the measurement of health and medical effectiveness, health care and societal costs, and their integration into a formal assessment of alternative treatments. Applications from the literature will be used. By the end of the course, students are expected to be able to critique methods used in published papers.

HSTD 38000
Health Status Assessment: Measurement and Inference
Course Instructor: Kate Cagney
Offered: TBD
PQ: Descriptive and bivariate statistics. Recommended: Multivariate statistics, epidemiology
ID: PPHA 38000
This course will be an introduction to survey design and sampling methodology focused on health outcomes and the quality of medical care. We will address two central questions: 1) How do we measure health outcomes and the quality of medical care?; 2) How do we insure that the study population is representative of the population of interest? Topics will include concepts of quality and health status assessment, scaling and scoring health status and quality of life measures, assessing validity and reliability of these measures, uses and limitations of outcomes data, sample design, sampling methodology, and survey implementation.
HSTD 38300
Health Economics and Public Policy
Course Instructor: Tomas Philipson
Offered: TBD
PQ: Microeconomics at the level of the Econ 200-201 series or PPHA 323 & 324 or an equivalent of an intermediate microeconomics course and a working knowledge of calculus
ID: PPHA 38300 (Primary); ECON 27700
This course analyzes the economics of health and medical care in the United States with particular attention to the role of government. The first part of the course examines the demand for health and medical care and the structure and the consequences of public and private insurance. The second part of the course examines the supply of medical care, including professional training, specialization and compensation, hospital competition, and finance and the determinants and consequences of technological change in medicine. The course concludes with an examination of recent proposals and initiatives for health care reform.

HSTD 38400
Advanced Topics in Health Economics
Course Instructor: Tamara Konetzka & Rena Conti
Offered: 2010-2011 (Alternates)
PQ: Graduate courses in microeconomics and econometrics or statistics, including the use of linear and nonlinear regression methods.
The purpose of this course is to provide substantial exposure to the state of the evidence and the major theoretical and empirical approaches used to study salient issues in health economics. Selected topics may vary from year to year; examples include health capital, health insurance, health behaviors, health care market structure and competition, not-for-profit ownership, payment incentives, and the effects of information on provider behavior (e.g. public reporting and value-based purchasing) and consumer behavior (e.g., advertising and medical decision making). The course is aimed at students who wish to pursue a career in, or related to, health economics. Students will be expected to read each paper in depth, participate in discussions about them, and present and discuss several papers during the quarter. The instructors will assume that students have had prior graduate courses in microeconomics and econometrics or statistics, including the use of linear and nonlinear regression methods.

HSTD 39000
Master's Readings in Health Studies
Course Instructor: Varies
Arrange course content and meeting times with instructor.

HSTD 39100
Master's Research in Health Studies
Course Instructor: Varies
Arrange course content and meeting times with instructor.

HSTD 40500
Advanced Epidemiologic Methods
Course Instructor: Dezheng Huo
Offered: 2011-2012; Spring; T/Th 1:30-2:50pm
PQ: HSTD 31001
This course examines some features of study design, but is primarily focused on analytic issues encountered in epidemiologic research. The objective of this course is to enable students to conduct thoughtful analysis of epidemiologic and other population research data. Concepts and methods that will be covered include: matching, sampling, conditional logistic regression, survival analysis, ordinal and polytomous logistic regressions, multiple imputation, and screening and diagnostic test evaluation. The course follows in sequence the material presented in "Epidemiologic Methods."
HSTD 43201
Causal Inference
Course Instructor: Guanglei Hong
Offered: 2010-2011; (Alternates)
PQ: Intermediate statistics or equivalent.
ID: CHDV 30102 (Primary)
This course is designed for graduate students and advanced undergraduate students from social sciences, education, public policy, health studies, social service administration, and statistics who are involved in quantitative research and are interested in studying causality. The course begins by introducing the notion of counterfactual outcomes and various causal inference techniques that are comparatively new to most social scientists. A major emphasis will be placed on conceptualizing causal questions, comparing alternative research designs, and identifying the assumptions under which a causal effect can be estimated from non-experimental data. In addition to studying experimental, quasi-experimental, and non-experimental designs, students will become familiar with causal inference techniques suitable for evaluating binary treatments, concurrent multi-valued treatments, time-varying treatments, as well as moderated and mediated treatment effects in non-experimental data.

HSTD 45610
Policy Analysis Methods and Applications
Course Instructor: Harold Pollack
Offered: 2011-2012; Winter: T 1:30-4:20pm
PQ: SSAD 45600 (Primary); PPHA 40101
This course examines the intellectual bases and analytic tools for the professional practice of policy analysis, with an emphasis on economic policy analysis in the form of cost-benefit analysis, decision analysis, and cost-effectiveness analysis. Many examples will be drawn from medicine and public health, which offer particularly clear application of the basic methods. However we will also draw upon examples and challenges from environmental policy, criminal justice, transportation, and welfare policy.

Topics to be covered will include cost-benefit analysis, decision analysis, quality of life and cost measurement, model development and parameter estimation, and cost-effectiveness methods. Students will have weekly problem sets and instruction in a computer lab that will provide them with hands on experience performing decision analysis and cost-effectiveness analyses. Students taking this course will be prepared to take Advanced Applications of Cost-Effectiveness Analysis, which provides doctoral-level training in this area.

HSTD 49000
Ph.D. Readings in Health Studies
Course Instructor: Varies
Arrange course content and meeting times with instructor.

HSTD 49100
Ph.D. Research in Health Studies
Course Instructor: Varies
Arrange course content and meeting times with instructor.

HSTD 59000
Medical School Readings in Health Studies
Course Instructor: Varies
Arrange course content and meeting times with instructor.

HSTD 59100
Medical School Research in Health Studies
Course Instructor: Varies
Arrange course content and meeting times with instructor.