

DEPARTMENT OF EPIDEMIOLOGY

SCHOOL OF PUBLIC HEALTH

SCHEDULE OF COURSES: SPRING 2012

[Note: PRE-requisites must be met prior to beginning course; CO-requisites can be taken concurrently]

COURSE#	SECTION#	TITLE	DESCRIPTION	PRE- OR CO- REQUISITES	FACULTY	DAY(S) [T=Tues] [R=Thurs]	TIME(S)	ROOM(S)	REGISTRATION COMMENTS
600	001	PRINCIPLES OF EPIDEMIOLOGY (3 credits) Must register for one lab section: sections 601-602 (see below)	An introductory course that considers the meaning and scope of epidemiology and the uses of morbidity, mortality, and other vital statistics data in the scientific appraisal of community health.		Schoenbach, Alexander	T	3:30-4:45		
600	601	PRINCIPLES OF EPIDEMIOLOGY *LAB*	See above	See above	See above	T	5:00-6:50		
600	602	PRINCIPLES OF EPIDEMIOLOGY *LAB*	See above	See above	See above	W	4:00-5:50		
690	001	PROBLEMS IN EPIDEMIOLOGY: INDEPENDENT STUDY (1 or more credits, depending on scope of planned work)	A course for students who wish to make an intensive study of some special problems in epidemiology. Reserved for students making independent study arrangements with individual instructors.	Permission of instructor required	Per arrangement with faculty			N/A	Go to Student Services Office (MC2106) to register
690	003	PROBLEMS IN EPIDEMIOLOGY: EMERGING & RE-EMERGING INFECTIOUS DISEASES: CHALLENGES OF THE MODERN DAY PLAGUES (3 credits)	Overview of basic principles of infectious diseases, focusing on emerging and re-emerging infectious disease agents that affect public health. Includes an introduction to the biology of viruses, bacteria, eucaryotic parasites, and host responses.	*PRE*-requisites: undergraduate biology and chemistry	Stamm	MWF	9:00-9:50		
690	004	PROBLEMS IN EPIDEMIOLOGY: INTEGRATING BIOMARKERS IN POPULATION-BASED RESEARCH (3 credits)	This course will introduce students to the collection of biological samples and analysis of biomarkers, and their incorporation into population-based research. Topics include study design, sample collection, processing and storage, quality control, exposure misclassification, biomarker validation, and biomarker applications in various research disciplines		Engel, S.	TTh	11:00-12:15		

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690	007	PROBLEMS IN EPIDEMIOLOGY: ADVANCED METHODS IN PHARMACOEPIDEMIOLOGY (3 credits)	This course aims to provide students the skills that they will need to do methods-oriented and compute-intensive research in pharmacoepidemiology. The first third of the course will teach students how to use simulation to evaluate statistical estimators and epidemiologic study designs. Simulation will be used to help students understand basic statistical concepts such as bias, consistency, mean-squared error, and asymptotic normality. Students will then learn how to use the bootstrap to estimate the standard error of complex estimators. The remainder of the course will be focused on different topics in pharmacoepidemiology, including propensity score methods, instrumental variable techniques, and self-controlled designs.	*PRE*-requisite: EPID 765	Brookhart, Stürmer	TTh	2:00-3:15		
690	008	SOCIAL EPIDEMIOLOGY: ANALYSIS AND INTERPRETATION (3 credits)	Approaches to social epidemiologic data and application/interpretation of various analytic methods. Topics include multilevel models, econometric and psychometric techniques, and issues in causal inference.	*PRE*-requisites: EPID 715 and EPID 718 or previous statistical modeling experience. Permission required for non-majors	Robinson	TTh	12:30-1:45		
715	001	THEORY AND QUANTITATIVE METHODS IN EPIDEMIOLOGY (5 credits) Must register for one lab section: sections 601-604 (see below)	An in-depth treatment of key methodological topics in epidemiologic research, including problem conceptualization, study design, research conduct, data analysis and interpretation.	*PRE*-requisite: EPID 705, EPID 710 and EPID 700 or equivalents. Co-requisite: BIOS 545. Priority for EPID majors. Permission required for non-majors.	Poole, Avery	MW	10:00-11:50		Go to Student Services Office (MC2106) to register if not an EPID major

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715	601	THEORY AND QUANTITATIVE METHODS IN EPIDEMIOLOGY - COMPUTER LAB	See above	This lab is for SAS OR STATA users only.	Poole, Avery	W	12:00-1:50		
715	602	THEORY AND QUANTITATIVE METHODS IN EPIDEMIOLOGY - COMPUTER LAB	See above	This lab is for SAS users only.	Poole, Avery	W	2:00-3:50		
715	603	THEORY AND QUANTITATIVE METHODS IN EPIDEMIOLOGY - COMPUTER LAB	See above	This lab is for SAS OR STATA users only.	Poole, Avery	F	9:00-10:50		
715	604	THEORY AND QUANTITATIVE METHODS IN EPIDEMIOLOGY - COMPUTER LAB	See above	This lab is for SAS users only.	Poole, Avery	F	11:00-12:50		
719	001	READINGS IN EPIDEMIOLOGIC METHODS (1 credit)	Weekly, in-depth discussions of readings in general epidemiologic methods. The format consists of a student panel and open discussion guided by a student moderator and a brief wrap-up by a faculty consultant.	CO-requisite: EPID 722; EPID majors only	Poole	W	2:00-2:50		
722	001	EPIDEMIOLOGIC ANALYSIS OF TIME-TO-EVENT DATA (3 credits)	Course covers epidemiologic analysis of time-to-event data and emphasizes weighing threats to the accuracy of inferences. Class time is spent discussing weekly readings and homework.	Pre-requisite: EPID 718 and SAS software expertise; Permission required for non-majors.	Cole	M W	10:00-10:50 10:00-11:50		
726	001	EPIDEMIOLOGIC RESEARCH METHODS (3 credits)	A second level course on conduct of epidemiologic research. Focuses on dealing with both the conceptual problems of applying the scientific method and practical issues encountered in carrying out the work.	*PRE*-requisite: EPID 715, EPID 725, at least 1 (preferably 2) substantive EPID course(s), and second year PhD student in EPID.	Gammon, Heiss, Meshnick, Sturmer	TTh	11:00-12:15		

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730	001	ADVANCED METHODS FOR EPIDEMIOLOGY: BAYESIAN STATISTICS FOR EPIDEMIOLOGISTS (1 credit)	The goal of this course is to elucidate key concepts of Bayesian statistics, including benefits to epidemiology and principles underlying its use. Will spend a significant amount of time on implementation, providing students with the tools necessary to conduct Bayesian analyses outside of the course.	*PRE*-requisites: 3rd year EPID student, SAS expertise (with access to version 9.2 or greater), and successful completion of EPID 722	Hamra, Richardson	W	10:00-11:50		
733	001	CLINICAL TRIALS IN EPIDEMIOLOGY (3 credits)	Systematic overview of principles in design, implementation and analysis of clinical trials. Emphasis on applications in chronic disease epidemiology. In-depth discussion of case examples from cardiovascular disease epidemiology emphasized.	*PRE*-requisites: EPID 600 and BIOS 600.	Bangdiwala, Menezes	TTh	8:00-9:15		
743	001	GENETIC EPIDEMIOLOGY: METHODS AND APPLICATIONS (3 credits)	Concepts and methods of genetic epidemiology relevant to the study of complex human diseases, including research on twins, familial aggregation, path analysis, segregation analysis, linkage analysis, and gene-environment interaction.	*CO*-requisites: EPID 715 & BIOS 545 or permission of instructor.	North	TTh	2:00-3:15		
744	001	ADVANCED GENETIC EPIDEMIOLOGY (3 credits)	This course will provide students who already possess a foundation in genetic epidemiology with practical knowledge required to use software tools for gene structure/function and disease association analysis.	*PRE*-requisite: EPID 743	North; Millikan; Lange, L.; Lange, E.	W	9:00-11:50		

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751	001	EMERGING & RE-EMERGING INFECTIOUS DISEASES: CHALLENGES OF THE MODERN DAY PLAGUES (3 credits)	Overview of basic principles of infectious diseases, focusing on emerging and re-emerging infectious disease agents that affect public health. Includes an introduction to the biology of viruses, bacteria, eucaryotic parasites, and host responses.	*PRE*-requisites: undergraduate biology and chemistry	Stamm	MWF	9:00-9:50		NOTE: Being offered for 3 credits instead of the usual 4. Please register as EPID 690, section 003, for 3 credits
754	001	MATHEMATICAL MODELING OF INFECTIOUS DISEASES (3 credits)	Introduction to basic methods for analysis and interpretation of epidemiological data on infectious diseases and for predicting the impact of control programs such as HIV prevention programs and vaccination strategies.	*PRE*-requisite: EPID 600; or equivalent. Permission required for non-majors	Van Rie	M	1:00-3:50	HSL 329	
759	01W	METHODS IN FIELD EPIDEMIOLOGY	Course will focus on epidemiological methods required to investigate urgent public health problems. Course covers the skills and tools needed to conduct outbreak investigations and communicate findings to the public.	This course is part of the Field Epi Certificate Program. Special permission is required for degree-seeking students.	Yeatts, Alexander, Horney	Web-based	N/A		Contact Lorraine Alexander (lorraine_alexander@unc.edu) for permission.
764	001	HOSPITAL EPIDEMIOLOGY (1-2 credits)	Comprehensive seminar in hospital infection control. Topics include issues in employee health, surveillance, outbreak investigation, environmental samplings and policy formation.	*PRE*-requisites: EPID 710 or 711 and EPID 752. Permission of instructor required	Weber	TBA	TBA		Go to Student Services Office (MC2106) to register after arranging number of credit hours with instructor.
770	001	CANCER EPIDEMIOLOGY AND PATHOGENESIS (3 credits)	Fundamental concepts in the context of specific cancers, including biologic mechanisms, genetic and environmental factors, social and public health issues, major studies and their interpretation.	*CO*-requisite: EPID 710 and BIOS 600 or equivalents; undergraduate major or strong preparation in the biological sciences. Permission required for non-majors	Troester	TTh	9:30-10:45		

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785	001	ENVIRONMENTAL EPIDEMIOLOGY (3 credits)	Methods for evaluating the health consequences of environmental and occupational hazards are presented. Topics include exposure assessment, disease surveillance, sources of bias, environmental injustice, and research collaborations with exposed populations. Three lecture hours per week.	*Pre*-requisites: EPID 710 & BIOS 600	Engel, L	TTh	12:30-1:45		
786	001	COMMUNITY-DRIVEN EPIDEMIOLOGY AND ENVIRONMENTAL JUSTICE (2 credits)	An introduction to concepts and methods in community-driven environmental justice research and present opportunities for active involvement in problem-solving. Topics include: public health and social justice; collaborative development of community-driven research questions; etc.	Pre-requisites: EPID 600 and BIOS 600 or equivalents	Wing	W	1:00 – 2:50		
795	001	INTRODUCTION TO PUBLIC HEALTH INFORMATICS (1 credit)	Gain an overview of the history and significance of public health informatics; discuss public health information systems in use today and their roles within the broader health care system; hear first-hand experiences from practicing public health professionals working or conducting research in this area. This is the intro course for a new grad-level Certificate in Public Health Informatics currently under development	None	Ising, Amy	W	1:00-1:50		

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804	001	DESIGN OF CLINICAL RESEARCH (3 credits)	This course is designed for students interested in a career in clinical research. The course will focus on the design of clinical studies, excluding traditional clinical trials, essential for a clinical researcher.	EPID 711 or equivalent	Loehr	R	2:00-4:45		Permission required if not an MSCR student
806	001	CLINICAL RESEARCH SKILLS (4 credits)	Practical research skills for clinical investigators, including grant application, instrument development, project management, data management, data analysis, and the communication of research results.	*PRE*-requisites: EPID 805, EPID 711 and participation in k30 program	Gaynes, Miller, Adimora, Weinberger	MF	2:00-3:50		
813	001	NUTRITIONAL EPIDEMIOLOGY (cross-listed with NUTR 813; administering department: NUTR) (3 credits)	This course focuses on exposure measurement and builds the foundation for critical evaluation of the nutritional epidemiologic literature.	*PRE*-requisites: EPID 600 and BIOS 600 or equivalents. Restricted to EPID and NUTR majors	He	TTh	9:30-10:45		
814	001	OBESITY EPIDEMIOLOGY (cross-listed with NUTR 814; administering department: NUTR) (3 credits)	Examines epidemiologic research on the causes, consequences, and prevention of obesity. Emphasis on methodologic issues pertinent to obesity research.	*PRE*-requisites: EPID 600 and BIOS 600 or equivalents	Stevens	MWF	9:00-9:50		
853	001	ADVANCED TOPICS IN PERINATAL AND PEDIATRIC EPIDEMIOLOGY (cross-listed with MHCH 853; administering department: EPID) (2 credits)	Critical review of current topics in and methods for perinatal and pediatric epidemiology.	*PRE*-requisites: EPID 710, 715 and EPID/MHCH 851	Siega-Riz	M	12:00-1:30		

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889	001	TOPICS IN EPIDEMIOLOGY: METHODS AND APPLICATIONS OF CARIOVASCULAR DISEASE SURVEILLANCE (1 credit)	Course will review major national and international cardiovascular disease surveillance studies with special focus on methods of case ascertainment and validation. Students will gain experience critiquing and interpreting surveillance studies. Recommendations for the future of surveillance of cardiovascular disease research and policy will be evaluated.	*PRE*-requisite: EPID 735 or permission or instructor	Rosamond	M	2:00-3:40			Course meets January 9 through February 27
889	002	TOPICS IN EPIDEMIOLOGY: SPECIAL TOPICS IN CARDIOVASCULAR DISEASE EPIDEMIOLOGY (1 credit)	Course will cover three major contemporary topics CVD epidemiology. For 2012 these topics will be epidemiology of stroke, heart failure epidemiology, and outcomes research in cardiovascular disease. Students will gain experience in the critique of methods specific to each topic. The course will also focus on review of current research directions in each of these areas.	*PRE*-requisite: EPID 735 or permission or instructor	Rosamond, Loehr, Kucharska-Newton	M	2:00-3:40			Course meets March 12 through April 23
894	001	INFECTIOUS DISEASE SEMINAR (1 credit)		EPID majors only. Permission of instructor required.	Meshnick	W	12:00-1:50			
896	001	SEMINAR IN CLINICAL RESEARCH (1 credit)	Practical topics pertinent to clinical research will be presented by faculty on campus and from local industry. Fellows in the Clinical Research Curriculum will also present their work.	MSCR or K-30 program participation	Miller, Gaynes, Weinberger, Raasch, Ransohoff, Henning, Loehr	F	12:00-1:50			
897	001	ADVANCED SEMINAR IN CARDIOVASCULAR RESEARCH (1 credit)	Intended to expose students to novel, ongoing research in CVD epidemiology. The focus is methodologic as well as topical.	Permission of instructor required	Heiss	T	12:30-1:30			Go to Student Services Office (MC2106) to register

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900	001 and others	EPIDEMIOLOGY PRACTICE (4 credits)	Designed to give epidemiology majors a supervised field experience in population health research.	Permission of instructor required	Various faculty	TBA	TBA	TBA	Register in the section assigned to the specific instructor (see campus schedule). Use section 001 if instructor does not have own section (must be done through EPID registrar's office)
910	001 and others	RESEARCH IN EPIDEMIOLOGY (1-9 credits)	Independent investigation in consultation with an instructor who must assign or approve the subject of research. Credits will vary according to the effort and rigor of the research.	Permission of instructor form must be filed with department registrar.	Various faculty	TBA	TBA	N/A	Register in the section assigned to the specific instructor (see campus schedule). Use section 001 if instructor does not have own section (must be done through EPID registrar's office)
992	001 and others	MASTER'S PAPER (3-6 credits)		Permission of instructor required.	Various faculty	TBA	TBA	N/A	
994	001 and others	DOCTORAL DISSERTATION (3-9 credits)		Permission of instructor required.	Various faculty	TBA	TBA	N/A	