

**DEPARTMENT OF EPIDEMIOLOGY AND COMMUNITY MEDICINE
FACULTY OF MEDICINE, UNIVERSITY OF OTTAWA
ROOM 2135, 451 SMYTH ROAD, OTTAWA, ONTARIO K1H 8M5**

FALL 2009 The Department proposes to offer the following courses in the 2009 Fall term **if enrolment is sufficient**. Courses begin on Wednesday, September 9, 2009, unless otherwise specified. **University of Ottawa students will register through Rabaska online beginning on August 4, 2009. Registration for Special Students (students not in a program at the University of Ottawa) will be from August 24 to September 4** at the above address. For more information contact Fay Draper at 562-5800 ext. 8008. **NOTE: Anyone who is not in our MSc Program must obtain permission from the professor to register for any of the courses.** Tuition fee information can be found at <http://www.registraire.uottawa.ca/Default.aspx?tabid=2708>.

EPI 5126. INTRODUCTION TO HEALTH CARE EPIDEMIOLOGY (3 cr.)

The aims of this course are for students to 1) understand the applications of classic epidemiologic and statistical methods within the healthcare setting; 2) gain knowledge of issues specific to infection control; 3) be able to critically evaluate interventions and new developments in infection control.

Place & Time: Health Sciences Building, Room 2111 - Fridays - 1:00-4:00

Instructors: K. Suh and V. Roth

EPI 5181. POPULATION HEALTH RISK ASSESSMENT I (3 cr.)

National and international policy frameworks for health risk assessment and management, including determinants of population health; epidemiological, clinical, and toxicological methods for identifying health hazards; population health surveillance; methods of population health risk assessment; regulatory, economic, advisory, and technological approaches to population health risk management; community action and social marketing; selection of risk management strategies; risk perception and risk communication. Lectures and case studies. Preparation of term paper on a current issue in population health risk assessment. Co-requisites: EPI 5240 and EPI 5242, or equivalents.

Place & Time: Health Sciences Building, Room 2111 - Tuesdays - 1:30-4:30

Instructors: D. Krewski and V. Tait

EPI 5183. APPROACHES TO COMMUNITY/PUBLIC HEALTH PROGRAM EVALUATION (3 cr.)

Critical review and practical application, in collaboration with a health care community partner, of approaches to community and public health program evaluation. Community partners include representatives of the community agencies whose mandate or remit includes evaluation of their community/public health program(s). Evaluation based on student's ability to (a) identify most appropriate approaches to evaluation, (b) critically review strengths and limitations of chosen approaches, (c) apply the selected approach appropriately to examine and quantify impact of the program(s).

Place & Time: Elisabeth Bruyère Research Institute, 43 Bruyère, Ernst & Young Conference Room, 700BA - Thursdays - 1:00-4:00

Instructor: L. Chambers

EPI 5188. HEALTH TECHNOLOGY ASSESSMENT (3 cr.)

Definition and scope of health technology assessment; needs assessment; practice variations; use of administrative databases; evaluation of diagnostic tests; development and use of practice guidelines and clinical prediction rules; health technology assessment in the developing world. Lectures, seminars and case studies.

Place & Time: Health Sciences Building, Room 3233 - Thursdays - 9:00-12:00

Instructors: J. Grimshaw, P. Tugwell and D. Fergusson

EPI 5240. EPIDEMIOLOGY I - INTRODUCTORY EPIDEMIOLOGY (3 cr.)

An overview of epidemiology - uses, methods, and data sources. Descriptive and analytical epidemiology. Lectures and assignments in which students will work with data and will gain experience in critically reviewing epidemiologic literature. Prerequisite: EPI 5242 or equivalent (may be taken concurrently).

Place & Time: Health Sciences Building, Room 3248 - Mondays - 1:00-4:00

Instructor: N. Birkett

EPI 5242. BIostatISTICS I (3 cr.)

Building on the students' prior background in statistics, this course explores the use of mathematical models in statistical data analysis. Topics include analysis of categorical data, choice of linear vs non-linear models, estimation of parameters, testing of hypotheses by parametric and non-parametric methods, analysis of variance, linear and logistic regression models, introduction to survival analysis. Prerequisite: Basic course in statistics.

Place & Time: Health Sciences Building, Room 2111 - Tuesdays - 9:00-12:00
and SAS Lab, Room 2111 - Mondays - 9:00-12:00

Instructors: T. Ramsay and K. Williams

EPI 6178. INTERVENTION STUDIES IN HEALTH RESEARCH (3 cr.)

Practical introduction to intervention studies in the health field, including experimental and quasi-experimental studies and clinical and community trials. Question formulation; conduct of literature reviews; design issues (choice of research design and study population, implications for validity of results); ethical issues; instrument development; data collection and management; approach to data analysis; report writing and presentation. Examples drawn from both population and clinical research. Development and presentation of proposal for an intervention study.

Place & Time: Health Sciences Building, Room 2154 - Wednesdays - 9:00-12:00

Instructors: B. Wilson and D. Schramm

WINTER 2010 - DRAFT

The Department proposes to offer the following courses in the 2010 Winter term.

EPI 5143. EPIDEMIOLOGICAL RESEARCH USING LARGE DATABASES (3 cr.)

A practical approach to using administrative and other large databases for epidemiological research. Basic and advanced statistical techniques to manipulate, link, and examine datasets; large health surveys; coding systems; data warehouses; data mining; birth and death registries; use of census data; linking postal codes to geographical files; geographical information systems. SAS will be used extensively in the course as the primary application package.

Place & Time: Health Sciences Building, Room 2111 - Wednesdays - 1:00-4:00

Instructors: A. Forster and C. van Walraven

EPI 5189. HEALTH ECONOMIC EVALUATION (3 cr.)

Brief overview of economics and health economics; examination of analyses used in epidemiologic and clinical research: cost-effectiveness analysis, cost-minimization analysis, cost-utility analysis (including determination of utilities), cost-benefit analysis, cost of illness studies and use of economic methods in priority-setting. Lectures and seminars. Written report required, presenting an economic evaluation or a detailed review of the economic literature in a particular area.

Place & Time: Health Sciences Building, Room 3001 - Thursdays - 1:00-4:00

Instructor: D. Coyle

EPI 5340. EPIDEMIOLOGICAL METHODS (1.5 cr.)

Major principles of study design and analysis: Validity in epidemiologic studies; Precision and statistics in epidemiology studies; Confounding; Additive and multiplicative interaction; Stratified analysis; Introduction to regression models; Introduction to regression modeling; Bias analysis; Analytical strategy. Prerequisites: EPI 5240 and EPI 5242

This course will begin on January 6, 2010 and the last class will be on February 17, 2010

Place & Time: Health Sciences Building, Room 3001 - Wednesdays - 9:00-12:00

Instructor: Y. Chen

EPI 5341. EPIDEMIOLOGICAL APPLICATIONS (1.5 cr.)

Interpretation of epidemiologic research and some specific topics: Complex survey data analysis; Attributable risk, odds ratio and relative risk estimation in multivariate analysis; Combined effect of multiple exposures and interaction measures; Chronic disease screening and surveillance; Environmental epidemiology. Prerequisite: EPI 5340

This course will begin on March 3, 2010 and the last class will be on April 14, 2010

Place & Time: Health Sciences Building, Room 3001 - Wednesdays - 9:00-12:00

Instructor: Y. Chen

EPI 5342. GENETIC EPIDEMIOLOGY (1.5 cr.)

Basic scope of genetic epidemiology, including an overview of types of human genetic variation, approaches to gene discovery vs. gene characterization. Specific issues include: Assessment of effect of family history on disease risk; Measurement of genetic variation, genotyping errors and factors affecting these; Study designs specially adapted to genetic epidemiology – family based designs (e.g. case-parent trio, case-sib designs), case-only designs; Candidate gene and genome-wide association approaches to genetic association; Gene-environment and gene-gene interaction; Integration of evidence; Evaluation of potential value of genetic information in screening (e.g. newborn screening), family history tools and genetic testing. Prerequisite: EPI 5340

This course will begin on March 1, 2010 and the last class will be on April 19, 2010

Place & Time: Health Sciences Building, Room 3001 - Mondays - 9:00-12:00

Instructor: J. Little

EPI 5343. OUTCOME MEASURES IN HEALTH RESEARCH (1.5 cr.)

Technical review of the design requirements for outcome measures in health research and clinical trials; a historical review of the evolution of such measures and a survey of the quality of existing instruments in various fields of health research (disability, quality of life, mental health, pain, etc). This course is designed for students who will need to use and interpret health measures in their research. Prerequisite: EPI 5340

This course will begin on March 5, 2010 and the last class will be on April 23, 2010

Place & Time: Health Sciences Building, Room 2111 - Fridays - 1:00-4:00

Instructor: I. McDowell

EPI 5344. SURVIVAL ANALYSIS IN THE HEALTH SCIENCES (1.5 cr.)

Application of advanced topics in statistical methods for epidemiology data analysis. This course explores methods for the analysis of data which includes information about the time when an event occurred. The approaches will be linked to epidemiological methods. The focus of the course will be on practical applications; mathematical theory will be presented only when required to understand the applications. The course will cover non-regression methods of analysing survival data, including actuarial life tables, the Kaplan-Meier method, the log-rank test, and person-time. The hazard curve will be introduced and linked to incidence rate/density. Proportional hazards regression modelling (Cox modelling) will be covered, including interpretation of model parameters, model building strategies and assessing the fit of the model. Methods to handle time varying covariates and non-proportional hazards will be discussed. Classes will include hands on modeling examples using SAS statistical software. Prerequisite: EPI 5340

This course will begin on March 2, 2010 and the last class will be on April 13, 2010

Place & Time: Health Sciences Building, Room 2053 - Tuesdays - 9:00-12:00

Instructor: N. Birkett

Continued

EPI 5345. APPLIED LOGISTIC REGRESSION (1.5 cr.)

Application of advanced topics in statistical methods for epidemiology data analysis. Foundation of model estimation: maximum likelihood; Modeling dichotomous outcome (dependent) variables: logistic regression; Logistic models with several independent variables; Interpretation of model parameters; Model building strategies; Assessing the fit of the model; Regression diagnostics. Classes will include hands on modeling examples using SAS statistical software. Prerequisite: EPI 5340

This course will begin on January 7, 2010 and the last class will be on February 18, 2010

Place & Time: Health Sciences Building, Room 1007 - Thursdays - 9:00-12:00

Instructor: K. Williams

EPI 5346. APPLIED LONGITUDINAL AND CLUSTERED DATA ANALYSIS (1.5 cr.)

Application of advanced topics in statistical methods for epidemiology data analysis. Introduction to longitudinal (repeated measures) and clustered data and overview of regression models for correlated data; Linear Mixed Effects Models: Modelling the mean; Modelling the Covariance structure; Generalized Estimating Equations and Generalized Linear Mixed Effects Models; Regression diagnostics; Missing data and drop-out; Case studies. Classes will include hands on modeling examples using SAS statistical software. Prerequisite: EPI 5340

This course will begin on March 4, 2010 and the last class will be on April 15, 2010

Place & Time: Health Sciences Building, Room 3001 - Thursdays - 9:00-12:00

Instructor: M. Taljaard

EPI 6126. ADVANCED HEALTH CARE EPIDEMIOLOGY (3 cr.)

Exploration of advanced healthcare epidemiology topics including pandemic planning, emergency preparedness, environmental considerations, healthcare surveillance techniques, quality improvement and patient safety initiatives, antimicrobial control programs, blood safety, developing and delivering educational programs, healthcare organization and administration, healthcare epidemiology research design. Lectures, presentations by invited experts, workshops and student presentations. Pre-requisites: EPI 5240, EPI 5126

Place & Time: Health Sciences Building, Room 2154 - Fridays - 1:00-4:00

Instructors: K. Suh and V. Roth

EPI 6278. ADVANCED CLINICAL TRIALS (3 cr.)

Lectures and laboratories on the detailed principles, design, methodology and statistical techniques associated with clinical trials. The course explores these concepts with an emphasis on new and emerging topics and procedures. Prerequisites: EPI 5242 and EPI 6178

THIS CLASS WILL BEGIN ON MONDAY, JANUARY 4TH.

Place & Time: Health Sciences Building, Room 3233 - Mondays - 1:00-4:00

Instructor: G. Wells

EPI 6281. POPULATION HEALTH RISK ASSESSMENT II (3 cr.)

Scientific methods for population health risk assessment; characterization of population health risks, and attendant uncertainties; risk modeling; combining risk information from different sources; risk acceptability, principles of risk management decision making; evidence-based risk management policy development; audit and evaluation of risk interventions; priority setting; case studies on current population health risk assessment issues. Term paper on a current methodological issue in population health risk assessment required. Prerequisites: EPI 5240, EPI 5242, and EPI 5181, or equivalents.

Place & Time: Health Sciences Building, Room 3001 – Tuesdays - 1:30-4:30

Instructors: D. Krewski