University of Manitoba
Graduate Courses in Community Health Sciences
Winter 2020

CHSC 6810 Biostatistics for Clinicians
(Tuesdays/Thursdays, 1700 – 1820 hours lecture; 1600 – 1650 optional tutorial Tuesdays; 1830 – 1920 optional tutorial Thursdays; Instructor: Shiva Halli)
This course is designed for students in clinical Master's programs in Medicine, Pharmacy, Dentistry and Nursing. It is designed as a basic biostatistics course that will introduce the tools needed to read and understand quantitative health literature. Pre-requisite: Permission of instructor.

CHSC 7212 Critical Perspectives on Gender and Health
(Tuesdays, 1300 – 1550 hours lecture; Instructor: Deborah McPhail)
This course explores gendered health issues from an interdisciplinary feminist perspective. Placing particular emphasis on the intersections amongst race, class, gender, and sexuality, this course explores how the contemporary concepts of “health” and “illness” have come to make sense in and through constructions of masculinity and femininity. Using feminist theories of gender embodiment to examine a range of topics pertaining to health, this course requires students to question common-sense and bio-medical understandings of health and illness. Pre-requisite: Permission of instructor.

CHSC 7220 Health and Health Services of First Nations, Metis and Inuit Peoples
(Mondays, 1330 – 1550 hours; Instructors: Josée Lavoie, M. Fowler and Elder G. Shingoose)
Seminar-based course critically examines First Nations, Metis and Inuit health status, health care services, historical assumptions about indigenous populations, and 'pre-Canada' world events influencing European colonization of this land with resultant marginalization of original indigenous Peoples. Prerequisite: Students outside CHS require instructor permission to register.

CHSC 7250 Science and Practice of Knowledge Translation in Health Research
(Tuesdays, 0930 – 1150 hours; Instructor: Kathryn Sibley)
This course will provide students with an overview of the fundamental aspects and current state of knowledge translation (KT) science and practice in health research and care. The topics covered in this course will equip the student with the basic principles required to integrate knowledge translation science into health research and apply best KT evidence and methodologies to their dissemination and implementation activities. Prerequisite: Instructor permission is required.
CHSC 7290 Economic Evaluation of Health Care  
(Thursdays, 0930 - 1150 lecture; Instructor: Evelyn Forget)  
The objectives of this course are to enable students to understand economic evaluation methodologies (cost-effectiveness, cost-benefit, cost-utility analysis) as applied to health care and to familiarize them with the applied literature on economic evaluation of health care. Prerequisite: CHSC 7810 or CHSC 7820 and CHSC 7520, or instructor permission.

CHSC 7310 Epidemiology of Health Care  
(Thursdays, 0830 – 1120 hours; Instructor: Alyson Mahar)  
This course will discuss the advantages and disadvantages of using large administrative data bases for research purposes. Substantive topics dealt with include: population health and the role of medical care, assessing system performance, quality of care and outcomes, short- and long-term outcome studies, technology assessment, and use of pharmaceuticals. Policy implications are considered. Students are required to learn SAS, a computer programming language and to analyze and interpret data for the term project. Prerequisite: Instructor permission is required.

CHSC 7320 Organization and Financing of the Canadian Health Care System  
(Wednesdays, 1200 – 1250 hours tutorial optional; 1300 – 1520 lecture; Instructor: Les Carrothers)  
Students will study the historical development and current structure of the Canadian health care system and relate its development to changes in social and political factors. The course provides an economic perspective on current policy issues in the organization, financing, and delivery of health care in Canada. Prerequisite: Students outside CHS require instructor permission.

CHSC 7320 Organization and Financing of the Canadian Health Care System  
(Fridays, 0800 – 0850 hours tutorial optional; 0900 – 1120 lecture; Instructor: Les Carrothers)  
Students will study the historical development and current structure of the Canadian health care system and relate its development to changes in social and political factors. The course provides an economic perspective on current policy issues in the organization, financing, and delivery of health care in Canada. Prerequisite: Students outside CHS require instructor permission.

CHSC 7330 Cultural Perspectives on Illness and Medical Practice  
(Thursdays, 0930 - 1150 hours; Instructor: Andrew Hatala)  
Systematic reviews and meta-analysis are integral to research success. Lectures and skill sessions will parallel the steps needed for successful completion of rigorous systemic reviews and meta-analyses of intervention studies. Prerequisites: CHSC 7520 and CHSC 7820. Instructor permission is required.

CHSC 7362 Systematic Reviews and Meta-Analysis  
(Thursdays, 1300 - 1550 hours; Instructors: Ryan Zarychanski, Ahmed Abou-Setta)  
Systematic reviews and meta-analysis are integral to research success. Lectures and skill sessions will parallel the steps needed for successful completion of rigorous systemic reviews and meta-analyses of intervention studies. Prerequisites: CHSC 7520 and CHSC 7820. Instructor permission is required.
CHSC 7400 T20 Seminar in Foundations of Disease Analytics Part B (spanned fall & winter)
(Fridays, 1330 - 1620 hours; Instructor: Lisa Lix)
The course will expose Visual and Automated Disease Analytics (VADA) Program students to selected topics in substantive and methodological topics associated with visualization and automated analytics for large-scale chronic and infectious disease data. This seminar-style course is participatory in nature.

CHSC 7400 T23 Critical Social Theory and Health: A Directed Reading Course
(Thursdays, 1400 - 1630 hours; Instructor: Rob Lorway)
In this directed reading course, students will travel a diverse theoretical terrain of foundational texts in social theory while being guided on how to think with these ideas as they relate to issues of health and illness facing the world today. The course will engage students in close readings of these challenging and complex texts. Concise excerpts will offer powerful new avenues for rethinking our analysis of contemporary health issues and our approaches to the amelioration of illness and disease. It is expected that each student will carve out their own theoretical journey that will contribute to the conceptual development of their eventual graduate research project. Through weekly readings, writing assignments, and discussion, we will explore theoretical questions of health and illness as they pertain to power, inequality and social change; subjectivity, ethics, and desire; ‘the body’ in culture and politics; gender, sexuality and race; and science and technology.

CHSC 7400 T26 Survival Analysis and Mortality Analytic Methods in Cancer Treatment
September 10 – April 6, 2020 spanned fall and winter
(Weekday and Timing TBA; Instructor: Dan Chateau)
This course will focus on analytic methods applied specifically to cancer data. This will begin with the most basic (i.e. Kaplan Meier) and proceed to more advanced methods, incorporating lead time, left censoring, addressing immortal time bias, confounding by indication, amongst other examples.

CHSC 7530 Applied Public Health Epidemiology
(Tuesdays, 1300 – 1550 hours; Instructor: Tammy Stuart Chester)
This course builds on the Principles of Epidemiology course through an applied focus. It discusses the application of epidemiologic principles in applied public health practice including the investigation of outbreaks, disease surveillance and the basic concepts of social network analysis, vaccine epidemiology and mapping. Students will also gain an understanding of the principles of prevention in public health practice, the benefits of qualitative methods and the role of the laboratory in outbreak investigation. They will receive instruction on the use of software for database development, data entry, analysis and presentation of results. Prerequisites: CHSC 7520, CHSC 7810 or CHSC 7820. Students outside CHS require instructor permission.

CHSC 7540 Advanced Epidemiology
(Tuesdays, 1000 – 1250 hours; Instructor: Marcelo Urquia)
Advanced epidemiologic research methods focusing on selected epidemiological issues (bias, confounding, matching, etc.). Discussion will be directed to both epidemiological and statistical considerations to find the optimal solution to a research problem. Prerequisites: CHSC 7520 (B+ minimum grade), CHSC 7820 (B+ minimum grade). Students outside CHS require instructor permission.
CHSC 7610 T04 Qualitative Data Analysis Software in Research 1.5 credit hours
(see course outline for dates); Instructor: Michelle Driedger
This course is designed to give students a hands on experience using NVivo to analyze a qualitative data set. A dataset will be given to students to use for all assignment purposes. Students will have the opportunity to bring their own dataset should they have one that has not been previously analyzed. At the end of the course, students will know how to import a variety of documents for analysis (e.g. interview transcripts, peer reviewed literature, etc.), they will learn how to develop nodes to code data, run queries, create project memos, and model their project. Students will be evaluated on their NVivo project file as well as a written report that accompanies the project to describe what they did and how they analyzed the data.

CHSC 7620 T02 Research Data Centre (RDC) Research Methods Part B 1.5 credit hours
(Thursdays (every other), 0900 - 1120 lecture; Instructor: Shahin Shooshtari)
A continuation of the introduction to the processes and methods involved in using Statistics Canada’s confidential master data files at the Research Data Centre (RDC). Students will gain skills in conducting secondary analyses in order to address important health and social policy research questions. Prerequisite: successful completion of Part A (CHSC 7610 T09); Venue: 309 Brodie Centre

CHSC 7730 Topics in Health Services Research Part B
(Tuesdays, 1300 – 1550 hours; Instructor: Malcolm Doupe)
This course will expose students to select health services research topics that are particularly relevant in Manitoba and Canada. Students are expected to actively engage in seminars led by health services researchers and decision-makers, and also provide informative presentations in their own area of research. Students will also gain Knowledge about various communication and knowledge translation strategies. Pre and/or Co-Reqs: CHSC 7320 and one of CHSC 7310 or CHSC 7300. Students outside CHS require instructor permission.

CHSC 7740 Advanced Qualitative Research Methods in Community Health Sciences
(Wednesdays, 1300 - 1545 hours; Instructor: C. Kelly)
The purpose of this seminar-based course is to provide students with advanced knowledge on transformative qualitative research methodologies, methods and analysis related to redressing health inequities from a strength-based interdisciplinary perspective. Using case study and other applied approaches students will gain knowledge and experience in: the application of critical social theories to health research; understanding processes of community, stakeholder, and partnership engagement from multiple scales and perspectives (e.g. indigenous populations locally and globally); various ways of generating qualitative data and analyzing texts consistent with selected theory; developing different products for knowledge exchange activities; and the ethics and politics inherent within the research process. Prerequisites: CHSC 7738 (formerly FMLY 7710) or instructor permission is required.
CHSC 7830 Advanced Biostatistics for Community Health Sciences
(Mondays, 0900 – 1150 lecture; 1230 – 1320 computer lab; Instructor: Mahmoud Torabi)
This course focuses on Generalized Linear Models. Upon completion of the course, students will be able to: 1) give examples of different types of data arising in public health studies; 2) understand differences and similarities between standard linear regression and models for discrete outcomes; 3) use modern statistical concepts such as binomial and Poisson in public health studies; 4) understand models for polytomous outcomes; 5) conduct and interpret logistic, conditional logistic (case-control), and probit regression inference; 6) conduct and interpret time-related outcome variables including survival analysis and proportional hazard regression; 7) conduct and interpret Poisson outcome variables and Poisson regression. Prerequisites: CHSC 7820 with minimum grade B+. Instructor permission is required.

CHSC 7840 Current Topics in Biostatistics: Design and Analysis
(Thursdays, 1300 – 1500 hours; Instructors: L. Lix, R. Balshaw, D. Jiang, R. Rabbani, L. Shafer, M. Torabi)
This course will introduce students to leading-edge advanced study design and statistical analysis methods for health research. The course will use case studies to explore the study design and analysis topics and their applications. Prerequisite: CHSC 7520; CHSC 7820 with minimum grade of B+; CHSC 7860, or instructor permission is required.

CHSC 7850 Advanced Biostatistical Methods for Hierarchical and Longitudinal Data
(Wednesdays, 0900 – 1220 hours; Instructor: Depeng Jiang)
The course teaches statistical methods for analyzing hierarchical ("multi-level") data. Mixed models are rapidly becoming the principal statistical tools for understanding hierarchical or "multi-level" data, such as the academic achievement of students within school classes within schools and perhaps within communities. The longitudinal application of "mixed models" provides analysis of temporal trajectories, for example, of the health of individuals (potentially nested within families, or communities) over time. Mixed models also can be utilized to analyze relationships, for example between health and income, over time, for individuals or families within communities, etc. The course will focus on the conceptualization, estimation and interpretation of mixed models in SAS. The primary emphasis will be on linear mixed models for continuous outcomes, however, nonlinear mixed models for categorical or count outcomes will also be discussed. Prerequisite: CHSC 7820 with a minimum grade of B+. Instructor permission is required.