

MDCH Course Offerings 2024-2025

Term	Course Catalog #	Format, Dates & Location	Course Description	Instructor Name and Role
FALL BLOCK WEEK 2024				
F24	600	LEC MTWRF 09:00-16:00 (Block Week) FOOTHILLS	Intro to Community Health Sciences An introduction to the Department as well as a general orientation to the education and research programs in Community Health. Determinants of health within a population health framework and the implications for the determinants of health construct in analyzing and addressing specific population health problems.	Marshall, Zack (PI) zack.marshall@ucalgary.ca
FALL SEMESTER 2024				
F24	605	LEC & TUT LEC MW 09:00-10:20 TUT W 10:30-11:20 FOOTHILLS	(VETM605) Introduction to Biostatistical Methods Analysis and design of research related to biological sciences. Emphasis is placed upon formulating good research questions, evaluating the appropriateness of different statistical methods for analyzing results, and performing and interpreting such statistical analyses. Statistical analyses will be carried out using modern statistical software. Prerequisite(s): Consent of the Cumming School of Medicine.	Deardon, Rob (PI) Rob.deardon@ucalgary.ca
F24	610	LEC & TUT LEC TR 13:00-14:20 TUT TR 14:30-15:20 FOOTHILLS	(VET610) Essentials of Biostatistics Introduces the fundamental concepts of summarizing data and statistical inference, including graphical displays, hypothesis testing, p-values, and confidence intervals. Specific topics include comparisons of means and proportions, non-parametric tests, correlation and regression, confounding, sample size determination, and power calculations. Additional topics include a brief introduction to analysis of variance and covariance, logistic regression, and analysis of time-to-event data. Students gain hands-on experience analyzing data using STATA statistical software. Although this course uses STATA exclusively, much of the technical knowledge and some of the computing techniques are applicable to any statistical package.	Li, Na (PI) Na.li@ucalgary.ca
F24	612	LEC MW 13:00-15:20 FOOTHILLS	Biostatistics III: Models for Repeated Measures Studies and Time-to-Events Studies Discusses techniques for analyzing data collected at more than one point in time (repeated measures) and time-to-event (survival) data. Topics include generalized linear models (GLM), generalized additive models (GAM), Poisson regression, generalized estimating equations (GEE), and proportional hazards regression with time-varying covariates. STATA statistical software is used to analyze data.	Fick, Gordon ghfick@ucalgary.ca
F24	629	LEC T 09:00-11:50 FOOTHILLS	Foundations of Practice & Science in Medical Education Foundational academic concepts in the science of medical education including an overview of the philosophy of science, history of medical education and medical education scholarship along with fundamental concepts in medical education scholarship such as ethics and professionalism, critical appraisal and academic leadership.	Ellaway, Rachel (PI) rachel.ellaway@ucalgary.ca
F24	630	LEC W 9:00 – 11:50 WEB-BASED	Designing Medical Education Research Why and how of research in medical education including core components of research, ethical issues, project management, the research proposal, reviewing the literature, data collection and analysis, reports and dissemination. Prerequisite(s): Admission to the Medical Education Specialization of the Community Health Sciences graduate program or consent of the program.	Beran, Tanya (PI) tnaberan@ucalgary.ca
F24	631	LEC & LAB LEC W 13:00-15:50 LAB 16:00-16:50 WEB-BASED	Implementation of Medical Education Research Technical aspects of conducting a study including writing questions, selecting methods that are aligned with the research questions and approaches to analyzing quantitative and qualitative data. Prerequisite(s): Admission to the Medical Education Specialization of the Community Health Sciences graduate program.	Beran, Tanya (PI) tnaberan@ucalgary.ca
F24	635	LEC W 11:00-13:45 MAIN	Foundations and Futures of CRDS History, current issues, and futures of intervention, activism, and academic study related to disability. This will include the systems and changing roles of those traditionally served, professionals, the teams they generate and society. Prerequisite(s): Admission to the Community Health Sciences graduate program. Consent of the instructor is required for all other students.	Edwards, Meaghan (PI) Meaghan.edwards@ucalgary.ca

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F24	640	LEC & TUT LEC T 09:00-11:50 TUT R 09:30-11:30 FOOTHILLS	(VETM640) Fundamentals of Epidemiology Principles and methods of descriptive and analytic epidemiology. Emphasizes the underlying concepts and approaches of epidemiological research and critical appraisal of epidemiologic studies including: observational study designs and their vulnerabilities to bias, measures of frequency and association, basic methods for addressing sampling variability, confounding, and effect modification. Concepts related to causal judgment in epidemiology are also introduced.	McCormack, Gavin (PI) gavin.mccormack@ucalgary.ca
F24	666	LEC W 09:00-12:00 DOWNTOWN CAMPUS	Health Policy An advanced level course focused on developing and deepening participants' understanding of critical policy issues affecting health and health services. The course will primarily review health policy in the context of Canadian populations and systems. However, a more global comparative frame of reference will be used to test, challenge and contrast both the historical and current underpinnings of health policy in Canadian jurisdictions.	Clement, Fiona (SI) fclement@ucalgary.ca/ Zwicker, Jennifer (SI) zwicker1@ucalgary.ca
F24	741	LEC M 16:00-18:50 FOOTHILLS	Systemic Reviews & Meta-Analysis An exposure to all steps involved in the conduct of a systematic review and meta-analysis.	Ronksley, Paul (PI) peronks1@ucalgary.ca
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WINTER BLOCK WEEK 2025				
W25	637	LEC TWRFS 09:00-16:00 WEB BASED	Politics of Inclusion and Exclusion of Disability and Community Studies Current topics relevant to inclusion and exclusion will be reviewed. An examination of research in disability provides an opportunity for the student to learn, understand, and compare legislation, policy, and ethical frameworks that inform action. Frameworks of choice, respect, consultation, collaboration, and co-operation will be examined.	Martino, Alan (PI) Alan.martino@ucalgary.ca
WINTER SEMESTER 2025				
W25	611	LEC & TUT LEC TR 13:00-14:20 TUT TR 14:30-15:20 FOOTHILLS	(VETM611) Biostatistics II: Models Health Outcomes Extends the fundamental concepts to modelling health outcomes using modern regression analysis techniques. Logistic and linear regressions, and their extensions, are covered in detail. The rationale, formulation, and statistical assumptions underlying each regression technique are discussed. Methods for selecting and assessing models are included. Additional topics include a brief introduction to models used in the analysis of repeated measures, longitudinal studies, and time-to-event data. STATA statistical software is used to analyze data. Required course for Biostatistics and Epidemiology specializations.	Williamson, Tyler (PI) Tyler.williamson@ucalgary.ca
W25	615	LEC R 17:00-19:50 FOOTHILLS	Machine Learning for Health Data Science An introduction to machine learning with a focus on health applications. While the theoretical foundation behind each machine learning method will be covered, emphasis will be on hands-on skills and practical applications. Individual work on in-class quizzes and computer assignments to learn basic knowledge and hands-on skills as well as interactive class discussions and teamwork.	Lee, Joonwu (PI) Joonwu.lee@ucalgary.ca
W25	627	LEC R 13:00-15:50 WEB BASED	Med Ed Assess & Measurement Approaches to assessment and measurement within the context of competency-based medical education.	Oddone Paolucci, Elizabeth (PI) eoddone@ucalgary.ca
W25	628	LEC R 09:00-11:50 FOOTHILLS	Teach, Learn & Curriculum Design Overview of context in which medicine is taught and learned, the theory related to learning and change, the key elements of curriculum design and evaluation, and examine traditional and innovative methods used to enhance student and practitioner knowledge, skills and attitudes.	Kassam, Aliya (PI) kassama@ucalgary.ca
W25	636	LEC W 17:00-19:50 FOOTHILLS	Advanced Exploration and Visualization in Health Introduction of deeper tools, skills, and techniques for collecting, manipulating, visualizing, analyzing, and presenting a number of different common types of data in the context of health and biostatistics. Techniques for visualizing and supporting interactive analysis and decision making for a variety of different types of data, including text, networks, and geographic, and temporal datasets will be introduced. There will be a focus on critical thinking, problem-solving,	

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			and good analysis practices to avoid cognitive biases when designing, thinking, analyzing, and making decisions based on data.	
W25	641	LEC R 09:00-12:00 FOOTHILLS	<p>Introduction to Clinical Trials An introduction to methodological issues in the design and conduct of randomized controlled trials. Topics include ethics, blinding, randomization, sample size determination, sequential designs, data monitoring, and the logistical and organizational aspects of single centre and multi-centre trials.</p> <p>Prerequisite(s): Community Health Sciences 610 and 640; or Medical Science 643.01 (Biostatistics I) and 647.01 (Fundamentals Of Epidemiology); and admission to the Community Health Sciences graduate program.</p> <p>Antirequisite(s): Credit for Community Health Sciences 641 and Medical Science 659.04 (Intro To Clinical Trials) will not be allowed.</p>	Skeith, Leslie (PI) laskeith@ucalgary.ca
W25	643	LEC W 09:00-11:50 FOOTHILLS	<p>Research in Healthcare Epidemiology and Infection Control Focus on research in health-care epidemiology with particular emphasis on Infection Prevention and Control. Research aspects of health-care epidemiology, including epidemiologic and biostatistical techniques and their application in various health-care environments will be presented. Topics will include surveillance, quantitative and qualitative methods, economic analyses, behaviour change, developing and assessing education programs and ethical practice.</p>	Leal, Jenine (PI) Jenine.leal@ahs.ca
W25	660	LEC W 16:00-18:50 FOOTHILLS	<p>Foundations of Health Services Research An introduction to the fundamental concepts of health services research including topics related to health systems and methods in health services research, as well as evaluation of health systems performance, with emphasis on knowledge translation and health policy creation and analysis.</p>	McCaughey, Deirdre Deirdre.mccaughey@ucalgary.ca
W25	661	LEC TR 17:00-18:15 FOOTHILLS	<p>Health Economics I Application of basic concepts from economics to examination of health and health care policy issues, such as why we have the kind of health-care system we have, various aspects of health care reform, promotion of health, and evaluation of interventions.</p>	Lu, Mingshan (PI) lu@ucalgary.ca
W25	662	LEC T 09:30-12:20 FOOTHILLS	<p>Economic Evaluation Designed for students interested in being able to critically interpret economic evaluation studies of health or health care interventions and beyond. The aim of the course is to introduce students to the concepts and methods of economic evaluation, provide an introduction to how it may serve as a useful tool in health and health care decision-making, and to enable students to critically appraise the economic evaluation literature.</p>	Spackman, Eldon (SI) Eldon.spackman@ucalgary.ca/ Marshall, Deborah (SI) damarsha@ucalgary.ca
W25	681	LEC & TUT LEC M 13:00-15:50 TUT F 09:30-11:20 FOOTHILLS	<p>Health Research Methods Introduction to health research, including research design, measurement, data collection, proposal and grant writing.</p>	Radin Pereira, Leticia (SI) Leticia.radinpereira@ucalgary.ca / Spackman, Eldon (SI) Eldon.spackman@ucalgary.ca
W25	683	LEC W 13:00-15:50 FOOTHILLS	<p>Intro to Qualitative Health Research for the Health Sciences A focus understanding and appraising published examples of qualitative research on health topics as well as analyzing qualitative findings in health research. The importance of both methods and theories for ensuring rigor will be emphasized. Examples of relevance to people's experiences of health, illness and health care as well as the social and structural determinants of health will be considered.</p>	Saah, Rebecca (PI) rebecca.saah@ucalgary.ca
W25	740	LEC & TUT LEC M 09:00-11:50 TUT W 09:00-10:50 FOOTHILLS	<p>(VETM740) Advanced Epidemiology Expands understanding of epidemiological research methods such as the assessment and management of threats to validity and approaches to causal assessment. Topics include handling of large data files, management of design effects, data linkage, identification and control of confounding, prevention of systematic and random (e.g. Type I, Type II) error, and addressing the problems associated with missing data. Exposure to generalized linear models, time to event models (including competing causes), generalized estimating equations, and mixed models. Includes an introduction to causal graphs, counterfactual reasoning, prediction, sample size calculations, risk-set sampling and meta-analysis.</p>	Ronksley, Paul (PI) peronksl@ucalgary.ca