

## Community Health Sciences Graduate Education Program (MDCH) Requirements by Specialization

<b>EPIDEMIOLOGY (EPI) – MSc THESIS-BASED</b>	
<b>Description</b>	Epidemiology is the study of the distribution of diseases in populations and of factors that influence the occurrence of disease. Epidemiology examines epidemic (excess) and endemic (always present) diseases; it is based on the observation that most diseases do not occur randomly, but are related to environmental and personal characteristics that vary by place, time, and subgroup of the population (McGraw-Hill Professional Sci-Tech Encyclopedia; accessed online November 14, 2007 at <a href="http://www.answers.com/topic/epidemiology">http://www.answers.com/topic/epidemiology</a> ).
<b>Additional Admission Requirements</b>	In addition to the Faculty of Graduate Studies' requirements, all applicants must meet the minimum admission requirements of the home program.
<b>MDCH Core Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 600: Introduction to CHS</li> <li>2) MDCH 610: Essentials of Biostatistics</li> <li>3) MDCH 640: Fundamentals of Epidemiology</li> <li>4) MDCH 681: Health Research Methods</li> </ol>
<b>Epidemiology Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 611: Biostatistics II: Models for Health Outcomes</li> <li>2) MDCH 740: Advanced Epidemiology</li> </ol>
<b>Recommended Electives</b>	One graduate level half course equivalent as recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. As recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. Other courses offered at the University of Calgary or through the Western dean's Agreement ( <a href="https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans">https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans</a> ) may be used to fulfil elective requirements, with the approval of the student's supervisor(s) and home department GPD.
<b>Seminars</b>	Students in MDCH 600 must attend all CHS-OIPH Weekly Seminars in the Fall and Winter terms. Additional seminars as recommended by student's supervisor/committee.
<b>Thesis Research</b>	All coursework must be completed prior to the Final Thesis Examination. Refer to requirements of home program regarding Thesis Monograph or Manuscript-based.
<b>Practicum</b>	None required, but usually arranged in conjunction with the student's supervisor(s).
<b>Epidemiology Competencies</b>	

<b>HEALTHCARE EPIDEMIOLOGY – MSc THESIS-BASED</b>	
<b>Description</b>	Healthcare Epidemiology is the study of infection control and prevention, while applying epidemiologic principles and prevention strategies to a wide range of quality-of-care issues. The goal is to maintain the utmost quality of patient care and healthcare worker safety in all healthcare settings (The Society of Healthcare Epidemiology of America, accessed on-line November 14, 2007 at <a href="http://www.shea-online.org/">http://www.shea-online.org/</a> ). <i>Hospital Epidemiology</i> has been replaced by <i>Healthcare Epidemiology</i> to reflect a broader context of practice. Healthcare Epidemiologists specialize in one of four areas: (1) Education, (2) Surveillance/Outbreak Management, (3) Consultation, and/or (4) Research.
<b>Additional Admission Requirements</b>	In addition to the Faculty of Graduate Studies' requirements, all applicants must meet the minimum admission requirements of the home program.
<b>MDCH Core Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 600: Introduction to CHS</li> <li>2) MDCH 610: Essentials of Biostatistics</li> <li>3) MDCH 640: Fundamentals of Epidemiology</li> <li>4) MDCH 681: Health Research Methods</li> </ol>
<b>Healthcare Epidemiology Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 611: Biostatistics II: Models for Health Outcomes</li> <li>2) MDCH 643: Research in Healthcare Epidemiology</li> <li>3) MDCH 649: Epidemiology of Infectious Diseases</li> <li>4) ONE of MDSC 611: Medical Microbiology OR MDSC 613.02: Pathogenesis of Bacterial Diseases</li> </ol>
<b>Recommended Electives</b>	One graduate level half course equivalent as recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. As recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. Other courses offered at the University of Calgary or through the Western dean's Agreement ( <a href="https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans">https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans</a> ) may be used to fulfil elective requirements, with the approval of the student's supervisor(s) and home department GPD.
<b>Seminars</b>	Students in MDCH 600 must attend all CHS-OIPH Weekly Seminars in the Fall and Winter terms. Additional seminars as recommended by student's supervisor/committee. In addition, it is required that students attend weekly Infectious Diseases Rounds.
<b>Thesis Research</b>	All coursework must be completed prior to the Final Thesis Examination. Refer to requirements of home program regarding Thesis Monograph or Manuscript-based.
<b>Practicum</b>	Practice half-time (i.e., about 15 – 20 hours/week) in an infection control capacity for a period of 3 to 6 months. Typically arranged in conjunction with the student's supervisor(s).
<b>Healthcare Epidemiology Competencies</b>	

<b>CLINICAL EPIDEMIOLOGY – MSc THESIS-BASED</b>	
<b>Description</b>	Clinical Epidemiology is defined in a variety of ways, including: (i) a basic science for clinical medicine; (ii) the study of determinants and effects of clinical decisions; and (iii) the study of the variation in the outcome of illness and the reasons for that variation. In CHS, clinical epidemiology is considered a framework for health professionals who wish to move beyond standard critical appraisal skills to: (i) skills in research methods, data collection, and measurement; (ii) analysis and optimal interpretation of data; and (iii) a framework for the practice of academic medicine or academic nursing, etc.
<b>Additional Admission Requirements</b>	In addition to the Faculty of Graduate Studies' requirements, all applicants must meet the minimum admission requirements of the home program, and must have a health professional degree (e.g., MD, MScN, etc) OR involvement in clinical practice.
<b>MDCH Core Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 600: Introduction to CHS</li> <li>2) MDCH 610: Essentials of Biostatistics</li> <li>3) MDCH 640: Fundamentals of Epidemiology</li> <li>4) MDCH 681: Health Research Methods</li> </ol>
<b>Clinical Epidemiology Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 611: Biostatistics II: Models for Health Outcomes</li> <li>2) MDCH 641: Introduction to Clinical Trials</li> <li>3) MDCH 647: Clinical Epidemiology</li> <li>4) MDCH 741: Systematic Reviews and Meta-Analysis</li> </ol>
<b>Recommended Electives</b>	One graduate level half course equivalent as recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. As recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. Other courses offered at the University of Calgary or through the Western dean's Agreement ( <a href="https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans">https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans</a> ) may be used to fulfil elective requirements, with the approval of the student's supervisor(s) and home department GPD.
<b>Seminars</b>	Students in MDCH 600 must attend all CHS-OIPH Weekly Seminars in the Fall and Winter terms. Additional seminars as recommended by student's supervisor/committee.
<b>Thesis Research</b>	All coursework must be completed prior to the Final Thesis Examination. Refer to requirements of home program regarding Thesis Monograph or Manuscript-based.
<b>Practicum</b>	None required, but usually arranged in conjunction with the student's supervisor(s).
<b>Clinical Epidemiology Competencies</b>	

<b>EPIDEMIOLOGY (EPI) – PHD THESIS-BASED</b>		
<b>Description</b>	Epidemiology is the study of the distribution of diseases in populations and of factors that influence the occurrence of disease. Epidemiology examines epidemic (excess) and endemic (always present) diseases; it is based on the observation that most diseases do not occur randomly, but are related to environmental and personal characteristics that vary by place, time, and subgroup of the population (McGraw-Hill Professional Sci-Tech Encyclopedia; accessed online November 14, 2007 at <a href="http://www.answers.com/topic/epidemiology">http://www.answers.com/topic/epidemiology</a> ).	
<b>Additional Admission Requirements</b>	In addition to the Faculty of Graduate Studies' requirements, all applicants must meet the minimum admission requirements of the home program.	
<b>MDCH Core Required Courses</b>	<ol style="list-style-type: none"> <li>1) MDCH 600: Introduction to CHS</li> <li>2) MDCH 610: Essentials of Biostatistics</li> <li>3) MDCH 640: Fundamentals of Epidemiology</li> <li>4) MDCH 681: Health Research Methods</li> <li>5) MDCH 611: Biostatistics II: Models for Health Outcomes</li> <li>6) MDCH 740: Advanced Epidemiology</li> </ol>	All incoming PhD students are expected to have completed the required MDCH courses for Epidemiology at the Master's level. If not, there are two options: (i) complete the courses, or (ii) request an exemption <b>PRIOR</b> to start of program based on having completed equivalent courses at the Master's level at the same or another university.
<b>Epidemiology Required Courses</b>	Courses appropriate to the advancement of the thesis research topic are required. These are selected in consultation with the Supervisor(s) and/or Supervisory Committee, must be approved by the GPD, and must include the required courses for Epidemiology at the MSc level if not previously completed. Suggested courses for consideration include: <ol style="list-style-type: none"> <li>1) MDCH 661: Health Economics</li> <li>2) MDCH 664: Administrative Data Analysis Methodology</li> <li>3) MDCH 741: Systematic Reviews and Meta-Analysis</li> </ol>	
<b>Recommended Electives</b>	As recommended by the student's supervisor/committee appropriate to the advancement of the thesis research topic. Other courses offered at the University of Calgary or through the Western dean's Agreement ( <a href="https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans">https://grad.ucalgary.ca/current/managing-my-program/studying-at-another-university/western-deans</a> ) may be used to fulfil elective requirements, with the approval of the student's supervisor(s) and home department GPD. Suggested courses for consideration include: <ul style="list-style-type: none"> <li>• MDCH 612: Biostatistics III: Models for Repeated Measures Studies and Time-to-Event Studies</li> <li>• MDCH 641: Introduction to Clinical Trials</li> <li>• MDCH 661: Health Economics</li> <li>• MDCH 664: Administrative Data Analysis Methodology</li> <li>• MDCH 742: Advanced Topics in Epidemiology</li> <li>• Directed Studies course</li> <li>• Other courses in the University of Calgary may be used to fulfil elective requirements with the approval of the student's supervisor(s) and home department GPD.</li> </ul>	
<b>Seminars</b>	Students in MDCH 600 must attend all CHS-OIPH Weekly Seminars in the Fall and Winter terms. Additional seminars as recommended by student's supervisor/committee.	
<b>Candidacy Examination</b>	All coursework must be completed and the dissertation proposal approved and submitted to Ethics prior to the Candidacy Exam. The Candidacy Examination will consist of three written questions devised by the supervisory committee and an oral examination.	
<b>Thesis Research</b>	All coursework must be completed prior to the Final Thesis Examination. Refer to requirements of home program regarding Thesis Monograph or Manuscript-based.	
<b>Practicum</b>	None required, but typically, arranged in conjunction with the student's supervisor(s).	
<b>Epidemiology Competencies</b>		
