Teaching at Memorial University

Teaching Philosophy
Medicine and teaching were the two professions I respected most in my youth, and I have continued to foster that notion to this day. I was fortunate enough to receive medical training and practice pedagogy in a medical school which united the two. Over my long career as a public health practitioner, a researcher, and a teacher, I have always believed that teaching transcends knowledge delivery, and it enriches minds and bestows privilege and responsibility at the same time.

I feel that good teaching transcends technical skills and knowledge - it requires a passion and dedication that is not confined to the classroom. Effective teaching is not a unidirectional process from the teacher to the student but happens when a student learns from his/her teacher, his/her peers, and most importantly, from himself/herself. Accordingly, a teacher must not only have the ability to convey knowledge but should also motivate students to learn outside the classroom and to use their knowledge to achieve their goals. Thus, good teaching should be measured by students’ future achievements rather than exam grades and favorable feedback. I have learned from experience that a good teacher should always be a good friend to his/her students and that respect from students can only be earned by respecting themselves. I use quizzes, exams, and grades to encourage each student to climb to a new height rather than to penalize ones disadvantaged due to various reasons. As an epidemiology instructor who mainly teaches research-stream graduate students, I always link my lectures to public health practice and research. My classroom teaching always begins with relevant health news which helps students reflect on and understand the teaching material in a larger context beyond the classroom.

1. Medical Students

2005-present: Introduction to Epidemiology (MED 6640)

Introduction to Epidemiology (as part of the Community Health curriculum to medical students): The aim of the curriculum is to assist the students in acquiring: 1) knowledge related to the collection, analysis, and interpretation of information as it relates to community health promotion/protection and disease/injury prevention; 2) the skills to utilize this knowledge in a variety of settings, as individual practitioners and as members of inter-professional health teams; 3) the attitudes that convey appreciation of the application of community health research tools and knowledge in promoting and maintaining health; 4) the prevention of disease/injury in individuals, families, and communities; and 5) the principles of evidence-based decision making and practice.

My role: As the course chair since 2005 (with interruptions in between) for the Epidemiology part, I design and deliver lectures. While the course codes and format have changed over time, the main contents have remained the same (principles, methods, and application of epidemiology in clinical settings). This is accomplished through 5-7 two-hour lectures.
MCCQE (Epidemiology) Tutorial
The tutorial is intended to prepare graduating medical students writing MCCQE, and I have been the primary instructor since 2005. The tutorial consists of a two-hour lecture and requested face-to-face meetings.

2. GRADUATE

2014: Co-instructor, Genetic Epidemiology (MED 6395)
This is a required course for graduate students in the Genetics stream and an elective for students in other programs. The course will provide students with an overview of genetic epidemiology and equip them with the skills to develop statistical methods and analyze genetic data. Specific topics include concept of genetic epidemiology, study design, ascertainment bias and confounding effect, quantification of genetic contribution to complex traits, linkage analysis, association analysis, genome-wide association, multiple testing issue, gene-environmental interaction, Mendelian randomization, gene expression analysis, introduction of NGS and metabolomics and bioinformatics analysis, and pathway and network analysis. The use of genetic software will be demonstrated. This course will provide students the necessary background and prepare them for advanced study and research in the area of genetic epidemiology.

My role: As a co-chair for this course, I teach three lectures: bias and confounding in genetic research, gene-environmental interaction, and Mendelian Randomization.

2007: Chronic Disease Epidemiology (MED 6274)
This elective course is designed for graduate students in community health and those interested in chronic disease epidemiology. The course provides a good opportunity for students to broaden their understanding on major chronic diseases in Canada in terms of the determinants, impact, and disease control. The focus of this course is on the principles of epidemiology that are of particular relevance to chronic diseases. The course emphasizes the research aspects of chronic diseases epidemiology and how the basic techniques of epidemiology and biostatistics are applied in the chronic diseases. Some of the less taught but frequently used concepts in epidemiological research, such as quality of life and economic evaluation, will also be introduced.

My role: I developed this course in 2007 and have been the course chair or co-chair (with Dr. Marshall Godwin in 2009) and primary instructor ever since.

2006: Epidemiology II: Advanced Quantitative Research Methods (MED 6275)
This is a required full credit course for PhD and MSc students in the epidemiology or biostatistics stream who wish to gain deeper understanding in quantitative issues that arise in the planning, analysis, and interpretation of epidemiologic research studies. This course explores some key epidemiologic concepts in more depth and introduces a number of commonly used analytical methods that are not found in the introductory epidemiology.

**My role:** I developed this course in 2006 and have been the course chair and primary instructor ever since.

**2006-2008: Co-instructor, Biology of Cancer (Epidemiology lecture, MED 6580)**

This course is designed to give graduate students in the Cancer Research Group, and those interested in the study of cancer, a broad, molecular, and cell biological survey of all current issues in oncology – from the causes, through biology, to treatment. This course is offered every other year.

**My role:** I was a co-instructor offering one lecture, leading one class discussion, and marking corresponding assignments.

**2005-2009: Epidemiology I: Introduction to Epidemiology (MED 6270)**

This is a required full credit course for graduate students in the Division of Community Health and Humanities. It is designed to provide the students with an understanding of the basic concepts, principles, and methods of epidemiology and its application in the practice of public health and preventive medicine. The course includes weekly lectures, three assignments, and a final exam.

**My role:** Course chair and primary instructor from 2005 to 2009, 2017-2018.