University of Victoria

Division of Continuing Studies | Population Health Data Analysis Program
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Job posting

Position: Instructor, Longitudinal Analysis and Multi-level Modelling of Population Health Data course

Posting Date: September 2, 2021

Closing Date: Posting will remain open until the pool is filled

 # Of Hires Needed: 2

Format: Online

Date: January-April 2022, May-Jul 2022 and following terms

Pay Rate: $6250 plus 4% vacation pay

Continuing education has been an integral part of the University of Victoria since its inception in 1963. Today, the Division of Continuing Studies (DCS) provides adult and continuing education programming in co-operation with UVic faculties and community partners. We offer a comprehensive portfolio of programs in a range of academic disciplines, using diploma, certificate, degree, and other programming models to serve adult, part-time, international, and geographically dispersed students.

Position summary:

The Division of Continuing Studies is interested in developing long-term relationships with superior instructors who have high professional standards, excellent communication skills, enthusiasm, and a commitment to creating learning experiences immersed in adult education principles.

We are seeking two professionals who desire the opportunity to share their knowledge and experience in the field of Population Health Data Analysis–*Epidemiological Statistics* and *Longitudinal Analysis and Multi-level Modelling of Population Health Data*. The successful candidate will be familiar with epidemiological study design and analysis methods. The ideal candidate will have a Ph.D. in the field of epidemiology or Population and Public Health with related research experience in the use of administrative data analysis. Experience in epidemiological and/or longitudinal design studies, proficiency in software programs such as SAS, R and Mplus programming and expertise in the use of administrative health data will be considered an asset.

We are especially interested in candidates who can demonstrate strong skills in the application of longitudinal analysis and multi-level modelling techniques in health research, applied use of administrative data, proficiency in SAS and Mplus programming, and a strong commitment to excellence in teaching and teamwork.

Qualifications:

Applicants must have:

- A minimum of a master's degree in Epidemiology, Population or Public Health, or Quantitative Social Science discipline; research and/or work experience in the fields of longitudinal data analysis and/or population and public health.
- Technical knowledge and experience using SAS with some R programming, and Mplus skills.
- Research and/or work experience in the field of epidemiology and Population and Public Health.
- Excellent interpersonal, communication, and facilitation skills.
- Previous teaching experience (designing content for a course, training, or presentation) is preferred.
- Teaching experience; knowledge in distance education considered an asset.

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Epidemiological Statistics courses description:

This is a basic course in epidemiology, which also covers a variety of analytic topics not commonly addressed in elementary statistics courses. The course will introduce students to the field of epidemiology. Students will critically evaluate articles in the epidemiologic literature and examine epidemiologic methods including:

- data collection
- study design and statistical analysis
- ratios
- relative risk
- contingency tables
- logistic and Poisson regression
- measurement error and exposure misclassification
- imputation of missing values
- multilevel regression models in epidemiology

Learning objectives

- Explain basic concepts in descriptive epidemiology such as incidence, prevalence, mortality, morbidity, and effect.
- Distinguish among common epidemiological designs such as case-control, cohort, cross-sectional and randomized controlled studies.
- Identify major categories of bias that can affect the validity of epidemiological studies.
- Apply common measures of association such as relative risk, odds and odds ratios, attributable risk, attributable risk percentage and population attributable risk to epidemiological data.
- Employ common tools of epidemiological statistics such as logistic and Poisson regression and become oriented to multilevel regression models to analyze appropriate data.

Longitudinal Analysis and Multi-level Modelling of Population Health Data course description:

This course provides an introduction to—and hands-on experience specifying—multi-level modeling and longitudinal analysis. Students will gain an understanding of different types of approaches including:

- time varying and invariant predictors
- multivariate and multi-population models with different outcomes
- missing data, errors in measurement and measurement misclassification

This course is designed to serve the needs of researchers who will analyze and model longitudinal data in population health research.

Learning objectives

- Define the methodological features of longitudinal data analysis.
- Describe fundamental concepts and issues in multi-level modeling.
- Identify different analytical approaches to longitudinal data analysis and specify their strengths and limitations.
- Use SAS and Mplus statistical modeling program to perform longitudinal data analyses in population health research.

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- Develop and practice longitudinal model specification, estimation, evaluation, and modification skills.
- Interpret and evaluate findings in longitudinal population health research.

For further information about the **Professional Specialization Certificate in Population Health Data Analysis**, please visit continuingstudies.uvic.ca/phda

The PHDA fully online, non-credit courses are offered as a partnership between Population Data BC, the University of Victoria, Division of Continuing Studies, and the Department of Geography.

How to apply:

Please submit a cover letter and current resume (in pdf format) to:

Ash Moosavi, Program Coordinator

Division of Continuing Studies University of Victoria

phdacoord@uvic.ca

Equity statement:

The University of Victoria is an equity employer and encourages applications from women, persons with disabilities, members of visible minorities, Aboriginal Peoples, people of all sexual orientations and genders, and others who may contribute to the further diversification of the University. All qualified candidates are encouraged to apply; however, in accordance with Canadian Immigration requirements, Canadians and permanent residents will be given priority.

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