

The Collaborative Program in Biostatistics
Department of Epidemiology and Biostatistics
Department of Statistical and Actuarial Sciences
The University of Western Ontario

last updated: November 1, 2011

The degree levels of the collaborative program are:

1. MSc (with specialization in Biostatistics)
2. PhD (with specialization in Biostatistics)

Biostatistics is the area of statistics concerned with medical, biological and agricultural applications. It is currently a very active area of statistical research. The collaborative program combines epidemiological and medical subject matter with a strong grounding in statistical theory and methodology and is directed towards students who are preparing for a career as a biostatistician in government, industry or academia.

Students in the collaborative program are registered in either the Epidemiology and Biostatistics program or in the Statistics program at the MSc or PhD level. Admission requirements are the same as for the home program. Students are required to take the same total number of courses and have the same thesis/project requirements as other students in their home department. Specific course requirements are detailed below.

Curriculum:

The required core courses (where a course is usually completed within one term) in the collaborative program are:

1. Two courses in biostatistics:
 - (a) Biostatistics 9510 (Biostatistical Research Methods);
 - (b) Biostatistics 9521 (Multivariable Methods in Biostatistics).
2. Two courses in statistics chosen from:
 - Statistical Sciences 9030 (Statistical Inference),
 - Statistical Sciences 9055 (Generalized Linear Models),
 - Statistical Sciences 9846 (Design and Analysis of Experiments),
 - Statistical Sciences 9850 (Advanced Data Analysis),
 - Statistical Sciences 9864 (Statistical Computing),
 - Statistical Sciences 9924 (Advanced Regression),
 - Actuarial Science 9004 (Survival Analysis).

In addition, students and faculty will participate in a working seminar/Journal Club in which current research papers or student research are discussed, and attend joint seminars in biostatistics.

Students registered in the graduate program in Epidemiology and Biostatistics in both MSc and PhD programs are required to write a thesis with a chief advisor from the Department of Epidemiology and Biostatistics and at least one member of the advisory committee drawn from the Department of Statistical and Actuarial Sciences. The additional courses beyond the core courses are:

1. Biostatistics 9522 (Topics in Biostatistics),
2. Epidemiology 9551 (Introduction to Epidemiology)
3. one of
Epidemiology 9553 (Analytic Epidemiology)
Epidemiology 9560 (Design and Analysis of Clinical Trials).

MSc students registered in the Department of Statistical and Actuarial Sciences are normally required to do a project on a topic in biostatistics, with the project supervisor from the Department of Statistical and Actuarial Sciences. PhD students in this department are required to write a thesis in biostatistics with chief advisor from the Department of Statistical and Actuarial Sciences and at least one member of the advisory committee from the Department of Epidemiology and Biostatistics. The additional courses beyond the core courses are normally in statistics or clinical trials at the graduate level. Specifically, MSc students are expected to take four additional graduate level courses. In special circumstances, a student may be allowed to take an undergraduate course at the 300-level or 400-level with permission of the graduate chair.

Exceptions to the course requirements may be granted, with permission from both the Graduate Chair in the home department and the Collaborative Program Committee.

Faculty:

The following faculty supervise students in the collaborative program:

1. Department of Epidemiology and Biostatistics:
 - (a) A. Donner
 - (b) N. Klar
 - (c) J. Koval
 - (d) GY Zou
 - (e) Y. Choi
2. Department of Statistical and Actuarial Sciences:
 - (a) D. Bellhouse
 - (b) J. Braun
 - (c) W. He
 - (d) B. Jones
 - (e) A. I. McLeod
 - (f) D. Murdoch

Application:

If you are interested in this program, please contact Professor W. He (whe@stats.uwo.ca) or Professor J. Koval (jkoval@biostats.uwo.ca). No more than 5 students will be accepted per year from each department.