The Collaborative Program in Biostatistics

Department of Epidemiology and Biostatistics
Department of Statistical and Actuarial Sciences

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 either in the Department of Epidemiology & Biostatistics or in the Department of Statistics and Actuarial Sciences 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 Epidemiology & Biostatistics chosen from (A=offered in the fall term, B=offered in the winter term):

   Biostatistics 9510A (Biostatistical Research Methods);
   Biostatistics 9521B (Multivariable Methods in Biostatistics);
   Epidemiology 9560 B (Design and Analysis of Clinical Trials)

2. Two courses in Statistical and Actuarial Sciences chosen from:

   Actuarial Science 9004A (Survival Analysis),
   Statistical Sciences 9030B (Statistical Inference),
   Statistical Sciences 9055B (Generalized Linear Models),
   Statistical Sciences 9846A (Design and Analysis of Experiments),
   Statistical Sciences 9850B (Advanced Data Analysis),
   Statistical Sciences 9864A (Statistical Computing),
   Statistical Sciences 9924A (Advanced Regression),

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.

The additional courses beyond the core courses for students registered in Epidemiology and Biostatistics are:

1. Biostatistics 9522B (Topics in Biostatistics),
2. Epidemiology 9551A (Introduction to Epidemiology)
3. One of: Epidemiology 9553 (Analytic Epidemiology) or Biostatistics 9660A (Advanced Biostatistics for Epidemiology).

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. 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 3000-level or 4000-level with permission of the graduate chair.

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

Faculty:

The following faculty supervise students in the collaborative program:

1. Department of Epidemiology and Biostatistics:
    a. G Bauer
    b. Y. Choi
    c. N. Klar
    d. D. Lizotte
    e. GY Zou
2. Department of Statistical and Actuarial Sciences:
    a. S. Bonner
    b. C. Dean
    c. W. He
    d. B. Jones
    e. A. I. McLeod
    f. D. Woodford

Application:

If you are interested in this program, please contact the Biostatistics Coordinators:

- Professor W. He (mailto:whe@stats.uwo.ca), if you wish to register with Statistical and Actuarial Sciences.
  Professor N. Klar (mailto:Neil.Klar@schulich.uwo.ca) if you wish to register with Epidemiology and Biostatistics.

No more than 5 students will be accepted per year from each department.