BIOSTATISTICS (PH.D.)

Offered by: Epidemiology and Biostatistics (Faculty of Medicine & Health Sciences)
Degree: Doctor of Philosophy

Program Description

Students will study theoretical and applied statistics and related fields; the program will train them to become independent scientists able to develop and apply statistical methods in medicine and biology and make original contributions to the theoretical and scientific foundations of statistics in these disciplines. Graduates will be prepared to develop new statistical methods as needed and apply new and existing methods in a range of collaborative projects. Graduates will be able to communicate methods and results to collaborators and other audiences, and teach biostatistics to biostatistics students, students in related fields, and professionals in academic and other settings.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Thesis

A thesis for the doctoral degree must constitute original scholarship and must be a distinct contribution to knowledge. It must show familiarity with previous work in the field and must demonstrate ability to plan and carry out research, organize results, and defend the approach and conclusions in a scholarly manner. The research presented must meet current standards of the discipline; as well, the thesis must clearly demonstrate how the research advances knowledge in the field. Finally, the thesis must be written in compliance with norms for academic and scholarly expression and for publication in the public domain.

Required Courses

Expand allContract all

Course	Title	Credits
BIOS 701	Ph.D. Comprehensive Examination.	0
BIOS 702	Ph.D. Proposal.	0

Complementary Courses (18-46 credits)

0-28 credits from the following list: (if a student has not already successfully completed them or their equivalent)

Expand allContract all

Course	Title	Credits
BIOS 601	Epidemiology: Introduction and Statistical Models.	4
BIOS 602	Epidemiology: Regression Models.	4
BIOS 624	Data Analysis and Report Writing.	4
MATH 523	Generalized Linear Models.	4
MATH 533	Regression and Analysis of Variance.	4
MATH 556	Mathematical Statistics 1.	4
MATH 557	Mathematical Statistics 2.	4

12 credits (chosen and approved in consultation with the student's academic adviser), at the 500 level or higher, in statistics/biostatistics.

6 credits (chosen and approved in consultation with the student's academic adviser), at the 500 level or higher, in related fields (e.g., epidemiology, social sciences, biomedical sciences).