

BIOSTATISTICS PhD

The Biostatistics (BIO) PhD program has an international reputation for excellence in methodological and applied research and training. Biostatistics students enjoy small classes and individual faculty attention, proximity to a large academic health center, a strong record in job placement, and opportunities for work experience in clinical trials and other areas of research. The minimum number of course credits required is 35 (with 43 being the maximum) and the required thesis is 24 credits, for a total of 59 to 67 credits.

YEAR ONE

Students entering the PhD program with an undergraduate degree or an MS in a field other than statistics or biostatistics complete preparatory coursework in the first year and then follow the same PhD program curriculum as students entering the program with an MS in Statistics or Biostatistics.

MATH 5615H Mathematical Analysis I (4 cr)
PubH 7405 Biostatistics: Regression (4 cr)
PubH 7406 Advanced Regression and Design (4 cr)
STAT 8101 Theory of Statistics I (4 cr)
STAT 8102 Theory of Statistics II (4 cr)

Year 1 Written Exam to be taken after finals of Spring Semester

YEARS TWO AND THREE

Students entering the PhD program with an MS in Statistics or Biostatistics (or have completed the Year One courses listed above) will follow the requirements outlined below.

BIOSTATISTICS CORE REQUIREMENTS

17 CREDITS

PubH 7450 Survival Analysis (3 cr)
PubH 8401 Linear Models (4 cr)
PubH 8403 Biostatistical Research Mentoring (1 cr)
PubH 8412 Advanced Statistical Inference (3 cr)
PubH 8432 Probability Models (3 cr)
PubH 8442 Bayesian Decision Theory (3 cr)

Preliminary Written Exam to be taken mid-August after completion of Biostatistics Core Courses

BIOSTATISTICS ELECTIVES

9 BIOSTATISTICS ELECTIVE CREDITS CHOSEN FROM THE FOLLOWING:

PubH 7420 Clinical Trials (3 cr)
PubH 7465 Biostat Consulting (3 cr)
PubH 8422 Modern Non-parametrics (3 cr)
PubH 8435 Latent Variable Models (3 cr)
PubH 8445 Statistics for Human Genetics (3 cr)
PubH 8446 Advanced Statistical Genetics & Genomics (3 cr)
PubH 8452 Longitudinal Data Analysis (3 cr)
PubH 8462 Advanced Survival Analysis (3 cr)
PubH 8472 Spatial Biostatistics (3 cr)
PubH 8475 Statistical Learning and Data Mining (3 cr)
PubH 8482 Sequential Clinical Trials (3 cr)
PubH 8485 Methods for Causal Inference (3 cr)
PubH 8492 Richly Parameterized Linear Models (3 cr)
Other 8000-level biostatistics topics courses that are not included in the core curriculum
8000-level course offered by the School of Statistics that is not included in the core curriculum

HEALTH SCIENCE ELECTIVES

3 TOTAL HEALTH SCIENCE ELECTIVE CREDITS REQUIRED:

Required:
PubH 6250 Foundations of Public Health (2 cr)

One additional health science elective credit must be selected from PubH 6xxx, 7xxx, 8xxx, level courses (e.g. SAS, ethics) offered by other divisions in the SPH or other Academic Health Center programs. Students can take more than 3 credits of health science electives if they wish.

YEARS FOUR AND FIVE

PubH 8888 Thesis Credit: Doctoral (24 cr)

PROGRAM COORDINATOR

Sally Olander
 Email: brown198@umn.edu
 Phone: 612-625-9185
 Web: sph.umn.edu

PROGRAM DIRECTOR

Julian Wolfson, PhD
 Email: bstdgs@umn.edu
 Phone: 612-625-9514
 Web: sph.umn.edu