Twin Cities Campus

Biostatistics Minor

School of Public Health - Adm

School of Public Health

Link to a list of faculty for this program.

Contact Information:
School of Public Health, MMC 819, A395 Mayo Memorial Building, 420 Delaware Street, Minneapolis, MN 55455 (612-626-3500 OR 1-800-774-8636)
Email: sph-ask@umn.edu
Website: http://www.sph.umn.edu

- Program Type: Graduate minor related to major
- Requirements for this program are current for Fall 2021
- Length of program in credits (Masters): 6
- Length of program in credits (Doctorate): 12 to 14
- This program does not require summer semesters for timely completion.

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The minor in Biostatistics is designed to familiarize students with the statistical tools necessary to analyze health science data. By taking public health courses focused on the fundamentals of statistical methodologies and programming techniques, students will gain skills that enable them to be involved in the design and analysis of quantitative studies as part of their future professional career or graduate study in an applied field.

The School of Public Health is accredited by the Council on Education for Public Health (CEPH).

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

Other requirements to be completed before admission:
Students interested in the minor are strongly encouraged to confer first with their major field advisor and director of graduate studies, and the Biostatistics director of graduate studies regarding feasibility and requirements.

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Use of 4xxx courses towards program requirements is not permitted.

Minor courses may require prerequisites.

PhD students must obtain pre-approval from the Biostatistics director of graduate studies for proposed minor field coursework.

No more than one course can be taken S/N. Approval by the Biostatistics director of graduate studies is required.

The minimum cumulative GPA for minor coursework is 3.00.

Program Sub-plans

Students are required to complete one of the following sub-plans.

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Students may not complete the program with more than one sub-plan.

Masters

Required Courses (6 credits)

Select 6 credits from the following in consultation with the Biostatistics director of graduate studies:

PUBH 7430 - Statistical Methods for Correlated Data (3.0 cr)
PUBH 7440 - Introduction to Bayesian Analysis (3.0 cr)
PUBH 7445 - Statistics for Human Genetics and Molecular Biology (3.0 cr)
PUBH 7450 - Survival Analysis (3.0 cr)
PUBH 7470 - Study Designs in Biomedical Research (3.0 cr)
PUBH 7475 - Statistical Learning and Data Mining (3.0 cr)
PUBH 7485 - Methods for Causal Inference (3.0 cr)

Students may take 7415 or 7420 but not both.

PUBH 7415 - Introduction to Clinical Trials (3.0 cr)
or PUBH 7420 - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)

Doctoral

Coursework Options

Coursework for Statistics PhD students (12 credits)

Required Courses (6 credits)

Take the following courses:

PUBH 7420 - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)
PUBH 7450 - Survival Analysis (3.0 cr)

Electives (6 credits)

Select at least 6 credits, in consultation with the Biostatistics director of graduate studies, from the following list:

PUBH 8442 - Bayesian Decision Theory and Data Analysis (3.0 cr)
PUBH 8452 - Advanced Longitudinal Data Analysis (3.0 cr)
PUBH 8462 - Advanced Survival Analysis (3.0 cr)
PUBH 8472 - Spatial Biostatistics (3.0 cr)
PUBH 8475 - Statistical Learning and Data Mining (3.0 cr)
PUBH 8482 - Sequential and Adaptive Methods for Clinical Trials (3.0 cr)
PUBH 8485 - Methods for Causal Inference (3.0 cr)

or **Coursework for non-Statistics PhD students (13 to 14 credits)**

Required Course Sequence (7 to 8 credits)

Select one of the following course sequences, in consultation with the Biostatistics director of graduate studies:

Sequence 1

PUBH 7401 - Fundamentals of Biostatistical Inference (4.0 cr)
PUBH 7402 - Biostatistics Modeling and Methods (4.0 cr)

or **Sequence 2**

PUBH 7405 - Biostatistical Inference I (4.0 cr)
PUBH 7406 - Biostatistical Inference II (3.0 cr)

Electives (6 credits)

Select at least 6 credits, in consultation with the Biostatistics director of graduate studies, from the following list:

PUBH 7430 - Statistical Methods for Correlated Data (3.0 cr)
PUBH 7440 - Introduction to Bayesian Analysis (3.0 cr)
PUBH 7445 - Statistics for Human Genetics and Molecular Biology (3.0 cr)
PUBH 7450 - Survival Analysis (3.0 cr)
PUBH 7470 - Study Designs in Biomedical Research (3.0 cr)
PUBH 7475 - Statistical Learning and Data Mining (3.0 cr)
PUBH 7485 - Methods for Causal Inference (3.0 cr)

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