Twin Cities Campus

Biostatistics M.S.

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, Fax: 612-624-4498)
Email: sph-ask@umn.edu
Website: http://www.sph.umn.edu

- Program Type: Master's
- Requirements for this program are current for Spring 2019
- Length of program in credits: 30 to 31
- This program does not require summer semesters for timely completion.
- Degree: Master of Science

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.

A biostatistician is an important member of many research teams. Working in close partnership with researchers across a wide array of scientific disciplines, a biostatistician designs studies and develops statistical tools to extract meaning from complex data.

With an MS in biostatistics, youll collaborate in the design of biomedical studies, analyze data, and put the results in context for researchers. Youll need mathematical, computational, and communication skills, as well as a curiosity about science.

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 3.10.

Other requirements to be completed before admission:
For the MS, prospective applicants should have taken at least three semesters of calculus (including multivariable calculus) and one semester of linear algebra. A year (two semesters) of coursework in undergraduate-level probability and mathematical statistics is recommended. Experience with a programming language (e.g., R, Java, C, Python) and exposure to applied statistics is helpful, but not required.

Special Application Requirements:
Students should apply for admission during fall semester only. New students are not admitted in spring semester.

Applicants must submit their test score(s) from the following:
- GRE
  - General Test - Verbal Reasoning: 150
  - General Test - Quantitative Reasoning: 146
  - General Test - Analytical Writing: 4.5

International applicants must submit score(s) from one of the following tests:
- TOEFL
  - Internet Based - Total Score: 100
  - Paper Based - Total Score: 600
- IELTS
  - Total Score: 7
- MELAB
  - Final score: 80

Key to test abbreviations(GRE, TOEFL, IELTS, MELAB).

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

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catalog website.

Program Requirements

Plan A: Plan A requires 20 major credits, up to null credits outside the major, and 10 thesis credits.The final exam is oral.

Plan B: Plan B requires 31 major credits and up to null credits outside the major.The final exam is oral.

This program may be completed with a minor.

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

A minimum GPA of 3.00 is required for students to remain in good standing.

At least 2 semesters must be completed before filing a Degree Program Form.

A comprehensive written exam is taken after year 1 spring semester final examinations.

An advanced background in mathematics or theoretical statistics is necessary for the Plan A (thesis) option. Students considering the Plan A must first consult with the advisor and director of graduate studies.

Coursework (31 Credits)

Plan B students take the following courses for at least 31 credits. Plan A students select at least 20 credits from the following in consultation with the advisor and director of graduate studies.

PUBH 7405 - Biostatistical Inference I (4.0 cr)
PUBH 7406 - Biostatistical Inference II (3.0 cr)
PUBH 7420 - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)
PUBH 7450 - Survival Analysis (3.0 cr)
PUBH 7494 - Integrative Learning Experience: Biostatistics (1.0 - 3.0 cr)
STAT 5101 - Theory of Statistics I (4.0 cr)
or STAT 8101 - Theory of Statistics 1 (3.0 cr)
STAT 5102 - Theory of Statistics II (4.0 cr)
or STAT 8102 - Theory of Statistics 2 (3.0 cr)

Public Health Foundations

PUBH 6250 - Foundations of Public Health (2.0 cr)

Biostatistics Electives

Take at least 8 Biostatistics elective credits from the following:

GEOG 5561 - Principles of Geographic Information Science (4.0 cr)
or GIS 5571 - ArcGIS I (3.0 cr)
or MATH 5615H - Honors: Introduction to Analysis I (4.0 cr)
or MATH 5616H - Honors: Introduction to Analysis II (4.0 cr)
or PUBH 7430 - Statistical Methods for Correlated Data (3.0 cr)
or PUBH 7435 *{Inactive}*(3.0 cr)
or PUBH 7440 - Introduction to Bayesian Analysis (3.0 cr)
or PUBH 7445 - Statistics for Human Genetics and Molecular Biology (3.0 cr)
or PUBH 7460 - Advanced Statistical Computing (3.0 cr)
or PUBH 7461 - Exploring and Visualizing Data in R (2.0 cr)
or PUBH 7462 - Advanced Programming and Data Analysis in R (2.0 cr)
or PUBH 7465 - Biostatistics Consulting (2.0 cr)
or PUBH 7470 - Study Designs in Biomedical Research (3.0 cr)
or PUBH 7475 - Statistical Learning and Data Mining (3.0 cr)
or PUBH 7485 - Methods for Causal Inference (3.0 cr)
or PUBH 8422 *{Inactive}*(3.0 cr)
or PUBH 8435 *{Inactive}*(3.0 cr)
or PUBH 8472 - Spatial Biostatistics (3.0 cr)
or PUBH 8475 - Statistical Learning and Data Mining (3.0 cr)
or STAT 5401 - Applied Multivariate Methods (3.0 cr)
or STAT 5601 - Nonparametric Methods (3.0 cr)
or WRIT 5051 - Graduate Research Writing for International Students (3.0 cr)
or WRIT 5052 - Graduate Research Presentations and Conference Writing for Non-Native Speakers of English (3.0 cr)

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