# Twin Cities Campus

# Biostatistics M.P.H.

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 S.E., Minneapolis, MN 55455 (612-626-3500 or 1-800-774-8636)

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• Program Type: Master's

- Requirements for this program are current for Spring 2020
- Length of program in credits: 42
- This program requires summer semesters for timely completion.
- Degree: Master of Public Health

Along with the program-specific requirements listed below, please read the <u>General Information</u> 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. The Biostatistics MPH program requires students to meet core competencies in public health administration, behavioral science, biostatistics, environmental health, foundations, epidemiology, and ethics, as well as complete both an applied practice and integrative learning experience.

#### Accreditation

This program is accredited by CEPH (Council on Education for Public Health).

# **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:

The admissions committee reviews applicants according to their record of academic achievement, demonstrated academic potential, letters of recommendation, background and experience, and other factors. GPAs and standardized test scores provide competitive points of reference for admission but are not alone decisive in the admissions review.

Prospective applicants should have taken at least:

- Three semesters of calculus (including multivariable calculus)
- One semester of linear algebra

Experience with a programming language (eg. Java, C, Python) is helpful, but not required.

## Special Application Requirements:

International applicants who have attended post-secondary institutions outside of the U.S. are also required to submit the following supporting documentation to SOPHAS.

World Education Services (WES) evaluation of foreign academic credentials. The University of Minnesota School of Public Health requires all applicants with foreign academic credentials to provide a WES course-by-course evaluation of those credentials. Note: Applicants with transcripts from Canadian schools are exempt from this requirement. Instead, applicants should have copies of their Canadian transcripts sent directly to SOPHAS.

Through special arrangements with SOPHAS, WES will deliver its credential evaluation report directly to SOPHAS by secure electronic transmission. This expedites the delivery of the evaluation report as well as images of the applicant's verified transcripts to SOPHAS and allows SOPHAS to process the report most efficiently. Go to http://www.wes.org/sophas for more information.

Note: Once WES receives the required documentation, it can complete an evaluation in seven business days or less, depending on the type of service requested. However, if additional research, correspondence, or verification is required, the evaluation will take longer. Students are recommended to start the process at least six weeks prior to the program deadline to ensure that their WES evaluation reports are complete by the deadline.

### **Proof of English Proficiency**

Applicants whose native language is not English, or whose academic study was done exclusively at non-English speaking institutions, must prove English proficiency by providing either official Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) scores.

Official report of the scores should be sent directly to SOPHAS using designation code 5688 for the TOEFL or designation code SOPHAS for the IELTS.

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

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: 7MELAB
- 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 <u>General Information</u> section of the catalog website.

### Program Requirements

**Plan C:** Plan C requires 42 major credits and up to null credits outside the major. The final exam is oral. A capstone project is required. **Capstone Project:** Students complete 1 credit of PUBH 7494 (Integrative Learning Experience).

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.

Courses must be taken A/F unless offered only S/N. Minimum grade of B- must be earned for required courses.

## Public Health Core Requirements (12 credits)

A minimum grade of B- must be earned for each of the following PUBH core courses:

#### Administration

PUBH 6751 - Principles of Management in Health Services Organizations (2.0 cr)

# Foundations of Social and Behavioral Science

PUBH 6020 - Fundamentals of Social and Behavioral Science (2.0 cr)

# **Environmental Health**

PUBH 6102 - Issues in Environmental Health (2.0 cr)

#### **Epidemiology**

PUBH 6320 - Fundamentals of Epidemiology (3.0 cr) or PUBH 6341 - Epidemiologic Methods I (3.0 cr)

## Foundations of Public Health

PUBH 6250 - Foundations of Public Health (2.0 cr)

# **Ethics**

PUBH 6741 - Ethics in Public Health: Professional Practice and Policy (1.0 cr)

### **Biostatistics Core Requirements (22 credits)**

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)

STAT 5101 - Theory of Statistics I (4.0 cr)

STAT 5102 - Theory of Statistics II (4.0 cr)

## **Applied Practice Experience (1 cr)**

PUBH 7496 - Applied Practice Experience: Biostatistics (1.0 cr)

## Integrated Learning Experience (1 credit)

Take PUBH 7494 for one credit.

PUBH 7494 - Integrative Learning Experience: Biostatistics (1.0 - 3.0 cr)

#### **Biostatistics Electives (6 credits)**

PUBH 7430 - Statistical Methods for Correlated Data (3.0 cr)

PUBH 7435 {Inactive}(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 7460 - Advanced Statistical Computing (3.0 cr)

PUBH 7461 - Exploring and Visualizing Data in R (2.0 cr)

PUBH 7462 - Advanced Programming and Data Analysis in R (2.0 cr)

PUBH 7465 - Biostatistics Consulting (2.0 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)

PUBH 8422 { Inactive } (3.0 cr)

PUBH 8472 - Spatial Biostatistics (3.0 cr)

# **Program Sub-plans**

A sub-plan is not required for this program.

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