

EPIDEMIOLOGY, PH.D.

Overview

The Department's programs are designed to prepare students for careers in health agencies and medical institutions; for consultation, especially in the biomedical fields; for independent biostatistical and epidemiological research; and for academic careers in schools of public health and medicine.

Areas of Specialization

- Biostatistics and Epidemiology

Career Opportunities

The programs are designed to prepare students for careers in health agencies and health-related institutions; for consultation, especially in biomedical fields; for independent biostatistical and epidemiological research; and for academic careers in schools of medicine or public health.

It is the student's responsibility to ensure they are enrolled in the prescribed courses and to pay tuition and fees at the time designated by the Bursar's Office. Details regarding tuition/fee charges and collection are available from the Bursar's Office.

Admission Requirements

In addition to the general admission criteria outlined in the Graduate College and College of Public Health Bulletins, applicants to the Department must also meet the following criteria:

1. A master's degree in either biostatistics or epidemiology from an accredited institution, provided that the academic and experience requirements for such a degree are equivalent to those required for the Master's degree at the University of Oklahoma Health Campus.
2. A graduate grade point average of at least 3.5.
3. Written evidence of research experience, if available. These materials will be evaluated for creativity and overall quality. Special preference will be given to applicants with research experience.
4. Proof of language proficiency for international applicants: TOEFL score of 88 or above.
5. Additional prerequisite requirements for the Doctoral degree in Biostatistics include:
 6. a. Calculus and Analytic Geometry I. Topics covered include equations of straight lines; Conic sections; functions, limits and continuity; differentiation, maximum- minimum theory and curve stretching.
 - b. Calculus and Analytic Geometry II. Integration and its applications; the calculus of transcendental functions; techniques of integration; and the introduction to differential equations.
 - c. Calculus and Analytic Geometry III. Polar coordinates, parametric equations, sequences, infinite series, vector analysis.

- d. Calculus and Analytic Geometry IV. Vector calculus; functions of several variables; partial derivatives; gradients, extreme values and differentials of multivariate functions; multiple integrals; line and surface integrals.
- e. A course in Linear Algebra

APPLICATION PROCESS

All applicants who wish to apply for admission to the Master of Science or Doctoral degree programs in Biostatistics or Epidemiology must apply, submit, and pay the fees for two electronic applications:

1. Schools of Public Health Application Service (SOPHAS)
2. College of Public Health Supplemental Application.

A Complete Application to the OU College of Public Health Will Include:

Completed SOPHAS application (www.sophas.org) and payment of required fee. The following materials must be loaded into or received by SOPHAS:

Transcripts

- **U.S. applicants**
SOPHAS requires a separate official transcript from every U.S. and Canadian institution attended.
- **International applicants:**
International applicants are required to submit transcripts/mark sheets to the World Education Services (www.wes.org (<http://www.wes.org/>)) for a course-by-course evaluation. Applicants should designate SOPHAS to receive the evaluation.

SOPHAS mailing address:

SOPHAS
P.O. Box 9111
Watertown, MA 02471

Career goal statement

This personal essay should be created in a word processing program and pasted into the online SOPHAS application. Complete instructions are within the SOPHAS application.

Current CV/ Résumé

The SOPHAS application allows applicants to upload the CV or résumé **before** electronically submitting the application. It is not possible to upload the resume to the SOPHAS application after e-submission of the application.

Recommendations

Three letters of academic or professional recommendation are preferable (personal references are not encouraged). Applicants will list recommenders' contact information and SOPHAS will send the recommenders instructions concerning how to submit their recommendations electronically through an online SOPHAS recommenders' portal. Recommendations must be submitted electronically.

International Applicants' English Language Proficiency

International applicants are required to submit TOEFL scores to SOPHAS using the designation code #5688. Minimum acceptable TOEFL score for most programs is 88 IBT. IELTS or other language proficiency tests will not be accepted. Additional information about the TOEFL requirement is available at <https://admissions.ouhsc.edu/Prospective-Students/International-Applicants/English-Proficiency-Requirement-TOEFL>

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THE UNIVERSITY OF OKLAHOMA COLLEGE OF PUBLIC HEALTH SUPPLEMENTAL APPLICATION AND FEE

All applicants to the OU College of Public Health are required to submit a supplemental application and fee. The supplemental application is available at: <https://admissions.ouhsc.edu/>.

Applicants must select the same program/s in the supplemental application as in the SOPHAS application. The fee for the supplemental application is \$100 if the applicant selects two professional programs (MPH, MHA, DrPH, Certificate of Public Health). If the applicant selects one professional program and one graduate program (MS or PhD), the fee for the supplemental application is \$175. If the applicant selects only graduate programs, the fee is \$75.

Doctor of Philosophy Degree Requirements

The Doctor of Philosophy (PhD) is an advanced, research-oriented degree program requiring in-depth study and research in a particular area in biostatistics or epidemiology. General requirements for admission and completion of the degree are consistent with those applicable to all PhD programs as described elsewhere in this bulletin. An applicant must present a master's degree in biostatistics or epidemiology. In addition, three of the five M.P.H. core courses are required. A minimum of 90 semester hours, excluding credit for research tools and including a maximum of 40 hours of transfer credit, must be presented for the degree. No more than 25 hours will be allowed for work related to the dissertation (6980).

All courses, including those related to research tools, must be approved by the student's advisory committee. An advisory committee appointed by the Graduate College upon recommendation of the department will supervise each student's program of study and monitor all coursework. Composed of at least five members, the committee must include at least one representative of a department other than the major one. Defense of the dissertation must be completed within five years of the end of the semester in which the general examination was successfully completed; otherwise, coursework must be revalidated.

The Outline of Graduate Work for the Doctor of Philosophy in Epidemiology is as follows:

Required Courses (10-11 credit hours)

| Code | Title | Hours |
|-----------|--------------------------------------|-------|
| BSE 5193 | Intermediate Epidemiologic Methods | 3 |
| BSE 6192 | Grant Writing Skills in Epidemiology | 2 |
| BSE 6194 | Advanced Epidemiologic Methods | 4 |
| BSE 5111 | Scientific Integrity in Research | 1 |
| BMSC 6011 | Integrity in Scientific Research II | 1 |

Methods (6 credit hours)

| Code | Title | Hours |
|-------------|--|-------|
| BSE 5343 | Methods in Infectious Disease Epidemiology | 3 |
| or BSE 6323 | Molecular and Genetic Epidemiology | |
| or BSE 6193 | Methods in Clinical Epidemiology | |

Biostatistics (15 credit hours)

| Code | Title | Hours |
|----------|-------------------------------|-------|
| BSE 5173 | Biostatistics Methods II | 3 |
| BSE 5663 | Analysis of Frequency Data | 3 |
| BSE 6643 | Survival Data Analysis | 3 |
| BSE 6663 | Analysis of Multivariate Data | 3 |
| BSE 6563 | Longitudinal Data Analysis | 3 |

Elective Courses (6 hours)

Students must select at least 6 credit hours of elective courses in Epidemiology, in addition to those listed above. These must be approved by the student's advisory committee. Courses: BSE 5980, 6950, or 6980 may not be used to satisfy this requirement.

Dissertation

| Code | Title | Hours |
|----------|------------------------------------|-------|
| BSE 6980 | Research for Doctoral Dissertation | 1-16 |

Notes

Student's advisory committee sets the remainder of any needed requirements to meet the 90 hours required for the degree.

Doctor of Philosophy Prerequisites

- Master's degree in Epidemiology or equivalent from an accredited institution.
- Successful completion of the following courses:

| Code | Title | Hours |
|----------|---|-------|
| BSE 5163 | Biostatistical Methods I | 3 |
| BSE 5013 | Application of Microcomputers to Data Analysis | 3 |
| BSE 5113 | Principles of Epidemiology | 3 |
| BSE 5303 | Epidemiology of Infectious Disease | 3 |
| BSE 5363 | Epidemiology and Prevention of Chronic Diseases | 3 |
| BSE 5033 | Foundations and Overview of Public Health | 3 |

With approval of the department and the graduate dean, up to 40 credit hours from the master's program may be counted toward the PhD.

Program Objectives

The Department of Biostatistics and Epidemiology has two main objectives:

1. Teach the concepts of biostatistics and epidemiology essential to all students in the health sciences.
2. Educate master's and doctoral students specializing in the fields of biostatistics or epidemiology leading to master and doctoral degrees in biostatistics or epidemiology.
3. Although the department functions as a single administrative unit, it includes two distinct disciplines: biostatistics and epidemiology. A student may work toward a master's or doctoral degree in either discipline, depending on his or her interests and background. Each discipline has a different set of required courses; however, there is some flexibility in the program to allow each student to develop his or her strengths and interests through elective courses.