



ONLINE GRADUATE CERTIFICATE PROGRAM IN EPIDEMIOLOGY

PROGRAM SUMMARY

The objective of the Online Graduate Certificate Program in Epidemiology is to provide graduate students specialized knowledge and skills in applying epidemiologic concepts and methods to prevention and public health problems. The curriculum will consist of 15 semester hours of graduate course work. All courses are offered by highly skilled professionals at the College of Health Sciences. Course work contains a substantial amount of application/utilization of tools and skills required to effectively complete epidemiological projects in public health. No additional internships or practicum is required. Total credit hours: 15; Percentage of program completed by distance learning – 100%; Percentage of program requiring campus visit – none.

WHO SHOULD APPLY

- ▮ Non-conventional students and non-degree seeking students (both local and international)
- ▮ Current graduate students
- ▮ Students after completion of a bachelors degree in a health-related field
- ▮ Non-degree seeking students from out-of-state
- ▮ Physicians, nurses, and public health professionals
- ▮ Mississippi State Department of Health employees
- ▮ Community Health Workers
- ▮ Public Health Advocates
- ▮ Public Health State Agency Workers
- ▮ Other university students around the world
- ▮ Professionals seeking enhanced skills in epidemiology
- ▮ Persons seeking new career options in epidemiology
- ▮ Any interested persons seeking expertise in epidemiology

CERTIFICATION

Upon completion of this Graduate Certificate Program in Epidemiology, you will be able to:

- ▮ Describe characteristics of the epidemiologic approach, for example, the use of natural experiments.
- ▮ Discuss the uses of epidemiology in determining disease causality, health needs of a population, delivery of services, program planning, and social policy.
- ▮ Identify measures of mortality and morbidity (proportions, rates, ratios, and adjusted rates) and the major sources of error in measurement of disease.
- ▮ Apply the epidemiologic triangle (i.e., agent-host-environment relationship) to the occurrence of infectious diseases.
- ▮ Evaluate screening programs for the detection of disease on the basis of criteria such as sensitivity, specificity, and predictive value.
- ▮ Be able to apply the tenets of primary, secondary, and tertiary prevention and care to real problems stemming from chronic and infectious diseases in the human population.
- ▮ Apply the techniques of outbreak investigation to identify health problems
- ▮ Develop epidemiologic research including case-control, cross-sectional, and cohort studies, and randomized controlled trials
- ▮ Critically review published articles
- ▮ Write research reports

APPLICATION INFORMATION

- ‡ The program is fully online.
- ‡ No GRE is required.
- ‡ To be admitted to the program, students must first be accepted into the Jackson State University Graduate School and have a cumulative GPA of minimum 2.0.
- ‡ Minimum graduate school requirements include an earned bachelor's and/or advanced graduate degree from an accredited college or university.
- ‡ Official copies of transcript(s) direct from accredited universities/college(s) to send to Graduate Admissions.
- ‡ Community college transcripts are not required.
- ‡ All prospective students must submit three letters of recommendation.
- ‡ International applicants must submit satisfactory TOEFL or IELTS scores.
- ‡ Out-of-state and International applicants must submit a \$25.00 application fee.

REQUIRED COURSES

To achieve the Graduate Certificate Program in Epidemiology, students must successfully complete the following courses:

PHS505: Principles of Epidemiology (3 credits): This course explores the science and practice of epidemiology and its contributions to disease detection, measurement, and prevention in clinical and public health settings. Specific topics include measurement of disease frequency, measurement of disease association, standardization, bias, and study designs. This course also introduces the practical fields of epidemiology.

PHS506: Research and Quantitative Methods (3 credits): This course introduces students to applied research methods in public health. It emphasizes essential concepts, techniques and methods of research practice. Basic measurement procedures for analyzing health data are examined through SPSS computer software, and the student is required to complete the design of a research study.

PHS521: Advanced Seminar in Epidemiology (3 credits): This course is designed to build on knowledge gained in introductory courses in epidemiology. The course focuses on research design and the development of research protocols and grant proposals. Students will be involved in didactic class assignments and critical reviews of published work. They will write a paper on a methodological topic and work collaboratively (as in the real world of epidemiologic research), under close supervision, to develop a research project.

PHS523: Chronic and Infectious Disease Epidemiology (3 credits): This course introduces students to various fields of practical epidemiology. This course primarily addresses the epidemiology of cancer, cardiovascular, and infectious disease. The first part will cover cardiovascular diseases and related topics such as hypertension, coronary heart disease, stroke, diabetes mellitus, obesity and cancer. The second part will address the epidemiology of infectious diseases such as HIV/AIDS, tuberculosis, malaria and a systemic approach to investigating an outbreak.

PHS524: Statistical Methods for Applied Epidemiology (3 credits): This course reviews the basic statistical tools used in epidemiology research. The course includes: sampling and sample size determination, methods to compute confidence intervals and p -values for key epidemiological measures of association, and an overview of regression and statistical methods for analysis of data.

Submit your online application to the Jackson State University Division of Graduate Studies at:

<https://mygradschool.jsums.edu/>

Call 601-979-2455 or email graduate@jsums.edu for additional information.