EPI 714 EPIDEMIOLOGIC STUDY DESIGN. (3)
This course provides students with advanced course material relevant to the planning and execution of epidemiologic studies of various designs. The course will consider study designs which employ routinely collected data on disease occurrence, such as would be undertaken in government agencies and health departments, and the classic etiologic study designs including the case-control, prospective cohort, retrospective cohort, nested case control, case-cohort and case-crossover designs. The course will focus considerable attention on measurement methods and measurement error, borrowing examples from the subfields of epidemiology including occupational, cardiovascular, and social epidemiology. Given current interest on multilevel methods of analysis, the class will discuss approaches to the incorporation of designing multilevel studies. Finally, we will consider recent advances in experimental epidemiology with consideration of controlled community trials. Prereq: CPH 605 or consent of instructor.

EPI 715 RESEARCH METHODS IN EPIDEMIOLOGY AND BIOSTATISTICS. (3)
This course builds a broad array of skills that are useful for the design and development of research protocols and funding applications for peer review, and for the analysis of resultant scientific data. Prereq: BST 760, EPI 714, and BST 639.

EPI 716 INFECTIOUS DISEASE EPIDEMIOLOGY. (3)
This course provides instruction about the epidemiological and microbiological characteristics of bacteria, fungi, prions, rickettsia and viruses causing emerging and infectious diseases. Prereq: Graduate student or consent of instructor.

#EPI 717 INTRODUCTION TO CAUSAL INference. (3)
Epidemiology can be defined as the study of the distribution and determinants of health and disease in human populations. As a result, most epidemiological studies are observational designs that are subject many biases. In this course, we will focus on the mitigation of confounding and selection bias through the application of causal inference methodologies. Prereq: CPH 712.