

COURSE DETAIL

EPIDEMIOLOGY

Country

China

Host Institution

Fudan University

Program(s)

Fudan University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Health Sciences

UCEAP Course Number

112

UCEAP Course Suffix**UCEAP Official Title**

EPIDEMIOLOGY

UCEAP Transcript Title

EPIDEMIOLOGY

UCEAP Quarter Units

3.00

UCEAP Semester Units

2.00

Course Description

The course covers the basic principles of epidemiology, examining the determinants of major public health problems including infectious diseases, injuries, environmental health, and emerging threats. Students are trained to develop applied epidemiology competencies in field investigation and public health surveillance by using study designs where they apply their knowledge and skills to solve real life public health problems. Students also address the principles of bias and confounding, thereby enabling them to familiarize themselves with all key epidemiological concepts. This course covers identification of major landmarks in the history of the discipline; calculation and interpretation measures of disease frequency such as prevalence and incidence, mortality, morbidity and their inter-relationship; identification of the major types of study designs within observational (e.g. ecological, cross-sectional, cohort, case-control) and experimental (e.g. randomized controlled trials, cross-over trials) epidemiological studies, and compares their strengths and limitations; calculation and interpretation of various measures of association such as relative risk (risk ratio, rate ratio, odds ratio), attributable risk (risk difference, rate difference), attributable risk percent and population attributable risk 6; and the major sources of bias in epidemiological studies and their potential effects on measures of association. Other course topics include the concepts of confounding, effect modification and mediation, distinguishing association from causation, critically appraising published individual epidemiological studies using a logical framework to ascertain their internal and external validity, the inter-relationships between host, agent, and environment in infectious disease epidemiology, the epidemiologic rationale and relative health benefits of the main strategies for prevention ('high-risk' vs. 'mass') and the requirements that a screening program must fulfil before it can be considered for possible public health application. The course looks at the future directions and current challenges in epidemiology.

Language(s) of Instruction

Chinese

Host Institution Course Number

MED130088

Host Institution Course Title

EPIDEMIOLGY

Host Institution Campus

Fudan University

Host Institution Faculty**Host Institution Degree****Host Institution Department**

Epidemiology

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