

Course Syllabus

Adjunct Professor : Effrossyni Gkrania-Klotsas

Course	Epidemiology		
Credit	1	Method of Teaching	Lecture
<p>Objective</p> <p>To provide the participants with an understanding of the basis of epidemiology, both principles as well as methods.</p>			
<p>Goals</p> <ul style="list-style-type: none"> - to be able to apply the basic principles of epidemiology to evaluate questions of public health relevance and importance. - to use the basis of epidemiological principles to develop and test hypothesis for possible disease risk factors. - to understand the limitations of inference, from bias, confounding and measures of association to limitations of various study designs. - to develop a foundation for designing valid and efficient protocols to address public health and clinical problems. 			
<p>Outline</p> <p>The course will be structured around specific examples, taken from everyday experience and the biomedical bibliography. Lectures will be delivered in English.</p> <p>The course is loosely based on : Rothman KJ, Greenland S, Lash TL. Modern Epidemiology, 3rd edition, 2008, Philadelphia (the “KR textbook”). The textbook is recommended but not required. All required knowledge will be presented in class.</p>			
<p>A little bit about the topics covered</p> <p>Introduction, course objectives: a little bit about me, a little bit about the world.</p> <p>Association vs Causation: chance, bias, confounding and the Bradford-Hill criteria of causality.</p> <p>Epidemiological studies, Descriptive studies and Analytical studies: Characteristics, strengths and limitations of basic study designs.</p> <p>Measures of disease frequency and association: Prevalence, Incidence, cumulative incidence, relative and absolute measures of association, use / interpretation, interrelationships of these measures.</p> <p>Interventional studies, Randomised clinical trials: conceiving, conducting and interpreting clinical trials.</p> <p>Methods of testing and estimation: comments on p-values, confidence intervals, sample sizes, effect modification.</p> <p>Infectious Diseases Epidemiology: special epidemiological techniques applying to infectious diseases epidemiology.</p> <p>Critiquing a paper workshop: group exercise in the approach to critiquing an epidemiological study.</p>			

Class Schedule

DAY 1 (5th of January 2016)

9:00 Introduction, course objectives

Causation and Causal Inference

11:00 Epidemiological studies, Descriptive and Analytical studies

Recommended reading: KR Textbook Chapters 2, 6, 7 and 8

Workshop materials: Real life contemporary examples

DAY 2 (6th of January 2016)

9:00 Measures of disease frequency

11:00 Measures of association

Recommended reading: KR Textbook Chapters 3 and 4

Workshop materials: Real life contemporary examples

DAY 3 (7th of January 2016)

9:00 Interventional studies, Randomized clinical trials

11:00 Methods of Testing and Estimation

Recommended reading: KR Textbook Chapters 10 and 13

Workshop materials: Real life contemporary examples

DAY 4 (8th of January 2016)

9:00 Special topics: Infectious Diseases Epidemiology

11:00 Critiquing a paper workshop

Recommended reading: KR Textbook Chapters 27 and 32

Workshop materials: Real life contemporary examples and three abstracts

We will add seminars by Japanese teachers for each to assist students with difficulty in language/background knowledge.

Text

Rothman KJ, Greenland S, Lash TL. *Modern Epidemiology*, 3rd edition, 2008, Philadelphia (the “KR textbook”)

Related readings

Achievement evaluation

Examination based on materials taught