



Summer Course in Applied Epidemiology and Risk Assessment

The global outbreaks such as Ebola and measles as well as the refugee problem show in a dramatic manner how a disease may spread in a population, how difficult it is to control outbreaks, especially pandemic ones and how the public and political response impact the measures that are taken. Some outbreaks can be prevented by vaccination where others cannot, but when vaccination is refused by certain groups in the society, the disease can break out and cause small epidemics.

The importance of applied epidemiology, the science that studies the patterns, causes, and effects of health and disease conditions in defined populations is obvious in our days. It is the cornerstone of public health, and informs policy decisions and evidence-based practice by identifying risk factors for disease and targets for preventive healthcare. Epidemiology does not solely deal with infectious diseases; environmental pollutants, radiation, toxic substances, food components, all can have an impact on human health and therefore fall within the realm of epidemiology. Major areas of epidemiological study thus include disease etiology, outbreak investigation, disease surveillance and screening, biomonitoring, and comparisons of treatment effects such as in clinical trials. Epidemiologists rely on other disciplines such as biology (to better understand disease processes), statistics (for appropriate use of data and draw appropriate conclusions), the social sciences (to understand proximate and distal causes) as well as other disciplines.

A risk assessment is a systematic process that involves identifying, analyzing and controlling hazards and risks. It is performed by a competent person to determine which measures are, or should be, in place to eliminate or control the risk in the workplace in any potential situation.

This [Summer Course in Applied Epidemiology and Risk Assessment](#) will give a short introduction to the various aspects of applied epidemiology and risk assessment. These include infectious factors, environmental factors and the risk assessment for these but also environmental epidemiology and statistics. It involves practical exercises, literature research and presentations as well as regular lectures and guest-lectures.

Educational Objectives

Upon completion of the core courses in this short course program, individuals will have gained specialized knowledge and skills on the application of epidemiologic concepts and methods to public health problems, as follows:

- Understand the place of epidemiology in public health, specifically how epidemiology is used to identify causes of disease, identify populations at high risk for disease, develop preventative methods and evaluate public health strategies.
- Calculate and interpret basic epidemiologic measures of disease frequency, identify sources of data for measuring health outcomes, and identify key aspects of measurement problems,
- Identify distinguishing features of fundamental study designs, including randomized trials, cohort and case-control studies, birth cohort and ecologic studies, and pre-post and quasi-experimental studies.
- Interpret and make inferences from results of epidemiologic studies
- Understand risk factor analysis and
- Assess the risk for disease in different case studies



Tuesday 18 July 2023 – Friday 21 July 2023

Course Directors: A.Vantarakis, Professor, M. Leotsinidis, Professor, University of Patras, Greece

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COURSE Programme

Time	Activity	Description
Tuesday 18 July 2023		
09.00-09.30	Welcome	
09.30-13.00	Module 1	Introduction to Basic Epidemiology
13.00-15.00	Lunch-break (offered by the course)	
15.00-18.00	Module 2	Introduction to Applied Epidemiology
19.30-21.00	Walking tour	
Wednesday 19 July 2023		
09.00-13.00	Module 3	Introduction to Biostatistics
13.00-15.00	Lunch-break (offered by the course)	
15.00-16.30	Practical course	Statistics using SPSS
16.30-18.30	Practical course	Case studies in Applied Epidemiology
20.00	Social event (offered by the course)	
Thursday 20 July 2023		
09.00-13.00	Module 4	Introduction to Risk Assessment
13.00-15.00	Lunch-break (offered by the course)	
15.00-18.30	Practical course	Risk assessment case studies
20.00	Official Dinner (offered by the course)	
Friday 21 July 2023		
09.00-13.00	Module 5	How to use Applied Epidemiology and Risk assessment methods in real life situations
13.00-15.00	Lunch (offered by the course)	
15.00-17.30	Group presentation	Group presentation and discussion
17.30-18.00	Closing	Handing out certificates, evaluation and goodbye
20.00	Optional Dinner	

Notes:

The information in this document can be subject to change

Summer School language: English (no certificate needed)

Course fees

Single Participant	Early Bird-Before 30 th May 2023	Booking After 30 th May 2023
High income country. Typical	350 € □	450 € □
High income country. Student	200 € □	250 € □
Low income country. Typical	250 € □	300 € □
Low income country. Student	150 € □	200 € □

Certificate: will be given at the end of the course

The Summer course will be organized if the number of participants is more than 20.