



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 epidemiology, the science that studies the patterns, causes, and effects of health and disease conditions in defined populations is very 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. This [Summer Course in Applied Epidemiology](#) will give a short introduction to the various aspects of epidemiology. These include infectious diseases 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.



Summer Course in Applied Epidemiology

Thursday 16 July 2020 – Monday 20 July 2020
Course Directors: C. Gogos, Professor, A. Vantarakis, Professor
E-mail: mscopyhealth@upatras.gr

COURSE LIST

| Time | Activity | Description |
|-------------------------|---|--------------------------------------|
| Thursday 16 July | | |
| 09.00-10.00 | Welcome | |
| 10.00-13.00 | Lecture | Introduction to Epidemiology |
| 13.00-14.00 | Lunch (offered by the course) | |
| 14.00-17.30 | Practical course | Epidemiological exercises |
| 18.00-20.30 | Walking tour | |
| Friday 17 July | | |
| 09.00-13.00 | Lecture | Introduction to Statistics |
| 13.00-14.00 | Lunch (offered by the course) | |
| 14.00-17.30 | Practical course | Statistics using SPSS |
| 18.00-21.00 | Social event (offered by the course) | |
| Saturday 18 July | | |
| 09.00-13.00 | Lecture | Epidemiology of Infectious Diseases |
| 13.00-14.00 | Lunch (offered by the course) | |
| 14.00-17.30 | Practical course | Epidemiology of Infectious Diseases |
| 20.00 | Official Dinner (offered by the course) | |
| Sunday 19 July | | |
| 09.00-13.00 | Lecture | Environmental Epidemiology |
| 13.00-14.00 | Lunch (offered by the course) | |
| 14.00-17.30 | Practical Course | Epidemiology and Environment |
| 18.00-21.00 | Social event | |
| Monday 20 July | | |
| 09.00-12.00 | Group presentation | Group presentation and discussion |
| 12.00-13.00 | Closing | Handing out certificates and goodbye |
| 13.00-14.00 | Optional Lunch | |

Notes:

The information in this document can be subject to change

Summer School language: English

Course fees

| Single Participant | Early Bird-Before 1 st April 2020 | Booking After 1 st April 2020 |
|------------------------------|---|---|
| High income country. Typical | 350 € □ | 400 € □ |
| 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.