In 2023 the department of Clinical Epidemiology of the Leiden University Medical Center is organising the 4 day-course

Advanced Epidemiological Methods

Date: Wed Nov 1, Thurs Nov 2, Wed Nov 8, Thurs Nov 9, 2023 (full course incl. all 4 dates)

Location: Oud-Poelgeest Conference Hotel, Poelgeesterweg 1, 2341 NM Oegstgeest, The Netherlands

Times: Wednesdays: 9.00- 21.00 incl. dinner , Thursdays: 9.00-17.30

Number of participants: max. 30

Course committee : Prof.dr. S. le Cessie, Prof.dr. O.M Dekkers, Prof.dr. R.H.H. Groenwold

Course coördinator: Mw Y. Souverein, E-mail y.souverein@lumc.nl

Course information The course, which is taught in English, provides an overview of recent methodological developments in epidemiological research. Classical and modern methods to correct for confounding will be discussed, including standardization, regression modelling, propensity scores, inverse probability weighting, and instrumental variable analysis. We also look at graphical methods to illustrate causal relations through Directed Acyclic Graphs (DAGs). These DAGs are a useful tool to track down confounding and selection bias, and to determine how one can correctly address bias and confounding in the data analysis. Other topics that will be discussed during the course include mediation analysis (i.e., determining the contribution of different paths between exposure and outcome), competing risks (i.e., handling survival time data with multiple competitive outcomes), and handling missing data in data analysis.

Target audience The target audience of the course are PhD students in training for epidemiologist, epidemiologists who want to gain knowledge on modern epidemiological methods, and researchers who are involved in the design and analysis of epidemiological scientific research. Because of the intensive nature of the course only a limited number of participants (max. 30) can be admitted to the course.

Subjects

Causal modelling
Directed acyclic graphs (DAGs)
Bias and Confounding
Propensity scores
Inverse probability weighting
Time-dependent confounding
Instrumental variable analysis
Mediation analysis
Competing risks
Missing data
Multiple imputation

Teaching methods The course consists of interactive lectures, alternated with computer-assisted exercises, using STATA / R.

Course level To be able to attend this course, a basic knowledge of epidemiological research is required (as is for instance taught at our Dutch and International courses on Clinical Epidemiology). Also basic knowledge of regression models (e.g., linear regression, logistic regression, survival analysis) is advised.

Course material The course material (course reader, scientific papers, and hand-outs of presentations) will be provided in digital format.

Required Laptop, preferably with STATA or R. All analyses will be performed in STATA/R. A temporary course license for STATA will be provided.

Certificate A certificate of attendance will be provided.

Course fee € 1.000 incl. lunches & dinner on Thursdays, excl. hotel accommodation. A limited number of hotel rooms will be available at the course location, at an extra fee of € 145,50 per night.

Registration Registration starts on April 1, 2023 via our website
Registration deadline: June 16, 2023
The confirmation of registration you receive, after submission of your registration, is your proof of registration.

As only a limited number of course participants can be admitted, a selection procedure will take place after the registration deadline. We will inform you about the outcome of the selection procedure within 2 weeks after the registration deadline. Because of the required selection procedure we ask you to complete all the required information on the registration form.

Payment Once you have been selected to participate in the course, you will receive an invoice for the course fee (and costs for hotel room, if applicable). Payment needs to be received by September 1, 2023

Cancellation policy In the event of cancellation of your participation before September 15, 2023, the course fee minus € 100 administration fee will be reimbursed. In the event of cancellation on or after September 15, 2023, the course fee/hotel room costs will no longer be reimbursed. Your cancellation needs to be submitted through e-mail to our course coördinator: y.souverein@lumc.nl and is considered valid after receiving a confirmation of receipt.