

- EPHD 300 Principles of Epidemiology 2.2; 3 cr.**
A course in principles, concepts and application of epidemiology in the public health field. The course consists of lectures, assigned readings and complementary practical sessions that provide students with basic epidemiological knowledge and tools relevant to public health practice. Students are given the opportunity to acquire an understanding of the vocabulary of epidemiology and methods of epidemiological research, investigation and control. This course also offers applied epidemiological knowledge of major diseases of public health significance with a focus on disease ecology, etiology, transmission and contagion modes.
- EPHD 310 Basic Biostatistics 2.2; 3 cr.**
An introductory Biostatistics course that covers basic concepts in statistical methods. The course demonstrates methods of exploring, organizing, and presenting data. The course presents the foundation of statistical inference from estimation, to confidence interval and testing of hypothesis. Applications include comparing population means or proportions via data obtained from paired or independent samples, one way ANOVA. Also, it introduces simple linear regression, correlations, logistic regression and nonparametric methods for data analysis.
- EPHD 312 Analysis of Continuous Data 2.2; 3 cr.**
A course that deals with concepts and methods for the analysis of continuous outcomes. Main focus is on multiple linear regression. Analytical means to control for confounding and effect modification while maximizing precision is explored. The methods of regression diagnostics are explained. Basic theory is considered; however, the emphasis is on application. Applications of the statistical techniques are carried out using the statistical package SPSS. *Prerequisite: EPHD 310, or consent of instructor.*
- EPHD 313 Analysis of Categorical Data 2.2; 3 cr.**
A course that covers univariate and multivariate statistical techniques for categorical data. Topics include distributions, measures of association and inference for categorical data, log-linear models for multi-contingency tables, and logistic regression for binary, polytomous, and ordinal responses. In addition, the concept of maximum likelihood estimation is introduced. Applications of the statistical techniques are carried out using the statistical package STATA. *Prerequisite: EPHD 310, or consent of instructor.*
- EPHD 320 Design and Analysis of Epidemiological Studies 2.2; 3 cr.**
This course is offered to graduate students who have already been exposed to basic epidemiological and biostatistical concepts. It covers in detail methodological issues concerning the design and analysis of epidemiological studies with particular emphasis on case control and cohort studies, and the interpretation of results. *Prerequisites: EPHD 300 and EPHD 310, or consent of instructor.*
- EPHD 321 Design and Analysis of Clinical Trials 1.2; 2 cr.**
A course that focuses on issues in the design and organization of randomized controlled clinical trials: ethical and legal issues, patient selection, recruitment, masking and randomization, endpoint definition, protocol development, and statistical analysis. Designs such as cross-over designs, factorial-designs, and meta-analysis are discussed. *Prerequisites: EPHD 300 and EPHD 310, or consent of instructor.*
- EPHD 322 Special Topics in Epidemiology 2.0; 2 cr.**
A course that covers selected topics of special interest to trainees in epidemiology. Examples include assessment of disease burden using epidemiological studies, occupational epidemiology, epidemiology of aging, epidemiology of maternal-child problems, or nutritional epidemiology.

EPHD 323 Epidemiology of Communicable and Non-communicable Diseases 3.0; 3 cr.

The course examines a number of communicable and non-communicable diseases selected, given their burden on morbidity and mortality, at the local and international level. The course provides an overview of their public health importance, epidemiology, associated risk and protective factors, and strategies for control and prevention. Major methodological issues pertaining to undertaking an assessment and/or implementing an intervention are also discussed. *Prerequisite: EPHD 300 or any undergraduate or graduate basic epidemiology course.*

EPHD 324 Special Topics in Biostatistics 1–3 cr.

A course that covers selected topics in biostatistics of special interest to researchers and trainees in epidemiology and population health. *Prerequisite: EPHD 310 or consent of instructor.*

EPHD 325 Medical Statistics 1.2; 2 cr.

Similar to EPHD 225. Offered to graduate students.

EPHD 326 Epidemiology 2.2; 3 cr.

Similar to EPHD 226. Offered to graduate students.

EPHD 330 Demographic Methods for Public Health Decision-Making 2.0; 2 cr.

An introductory course on selected demographic methods and measures of population health. The emphasis is on conceptual issues, measurement and hands-on experience with basic techniques, as well as inequalities in health over the life course. Topics covered include sources and quality of population data; rates and ratios; standardization and decomposition; mortality measures and the life-table; perceived versus actual morbidity; the burden of disease; period and cohort measures of fertility; migration rates; and marriage indices.

EPHD 331 Population Change and Health 3.0; 3 cr.

Population change is central to public health. This course provides a broad introduction to the field of population. It identifies core topics in population, discusses their relation to development and health, and emphasizes measurement issues. Topics covered include population size and growth as they relate to resources and to population health; components of population change including fertility and mortality, their links to development and consequences for health; population composition by age and gender and by socioeconomic status, and related inequalities; and population movements including forced, internal and international migration as factors of population change and health. Special focus is given to the Arab World and the Middle East Region.

EPHD 332 Population and Health Policy 3.0; 3 cr.

A course designed to explore the links between population, health, and development issues, with a focus on population policies and programs in the Middle East and North Africa. Topics include demographic trends and their implications for health policies; family planning programs and policies; the reproductive health paradigm; HIV/AIDS; gender and population policy; special health needs posed by the youth 'bulge' and population aging; political dimensions of population policies; and debates between the policy objectives of reducing population growth at the macro level and promoting individual well-being.

EPHD 333 Special Topics in Population Health 1- 3 cr.

An examination of specific topics in population health such as aging, burden of disease, reproductive health, fertility of adolescents, social determinants of population health, and the demography of refugee populations.

