

UNIVERSITY OF BELGRADE  
FACULTY OF MEDICINE  
PhD STUDIES

NAME OF THE MODULE: Epidemiology

CONTENT OF THE PROGRAM: Subject content includes the concept of causality, identification and definition of entities, characteristics of the natural course of the disease, disease and mortality indicators in the population with special reference to the concept of person-time and age-adjustment methods, indicators of the burden of disease, analysis of vital statistics, mathematical epidemiological models and sample sizes, grouping in time and space. This course will study the basic principles of designing descriptive, analytical (cross-sectional studies, case and control studies, prospective and retrospective cohort studies) and experimental epidemiological studies, the concept of risk (absolute, relative, attributable, attributable risk for the exposed group, population attributable fraction) and areas related to measurement errors. Special emphasis will be put on the designing of questionnaire, hybrid studies, the importance of qualitative research in relation to quantitative research and the basics of demography. Within other courses, it is planned to master the analysis of non-stratified data, stratified analysis and logistic regression analysis, as well as their application in epidemiological research. Measurement errors in different types of studies will be studied in particular, including the problem of confounding factors and methods for its control (matching, stratification, randomization, mathematical models). The application of various methods of multivariate analysis and solving research problems using these methods is also included in the content of the course. Subject content is also related to meta-analysis and systematic review, as well as the basics of evidence-based medicine, through theoretical and practical concept. Part of the course will be dedicated to critical appraisal of epidemiological studies.

ADMISSION REQUIREMENTS: General requirements for admission: 1. average grade from all previous levels of study at least 8.00, 2. knowledge of the English language to the level of ability to communicate and follow scientific literature, 3. appropriate computer skills, 4. desirable recommendations related to engaging in scientific and research work.

MEMBERS OF THE ADVISORY BOARD: 1. Prof. Dr. Tatjana Pekmezović, head, 2. Prof. Dr. Ljiljana Marković Denić, 3. Prof. Dr. Sandra Šipetić Grujičić, 4. Prof. Dr. Darija Kisić, 5. Prof. Dr. Jelena Drulović. Secretary of Advisory Board: Assist. Prof. Gorica Marić.

OBLIGATORY COURSES: Methodology of the scientific research, Research ethics, Informatics, Statistics for researchers in the field of biomedical sciences (basic course), Statistics for researchers in the field of biomedical sciences (advanced course), Epidemiological methods first part, Epidemiological methods second part.

ELECTIVE COURSES: Clinical epidemiology, Screening, Quality of life research, Pharmacoepidemiology, Epidemiology of cardiovascular diseases, Epidemiology of cancer, Epidemiology of chronic respiratory diseases, Epidemiology of infectious diseases, Epidemiology of endocrine and metabolic diseases, Neuroepidemiology, Hospital infections, Perinatal and reproductive epidemiology, Epidemiology of rheumatic diseases, Nutritional epidemiology, Molecular and genetic epidemiology.