



Study program: Doctoral Academic Studies in Biomedical Sciences		
Name of the subject: INTERACTIONS OF FOODS, DIETARY SUPPLEMENTS AND HERBAL MEDICINES WITH DRUGS		
Teacher(s): Jelena N. Jovičić Bata, Nebojša V. Kladar, Neda S. Gavarić		
Status of the subject: elective		
ECTS Credits: 20		
Condition: -		
Goal of the subject: Improving the knowledge in the field of interaction of foods (F), dietary supplements (DS), herbal medicines (HM) and drugs (D). An integral part of modern healthcare system is self-care, including self-medication. PhD students should gain insight into practical aspects of interactions of F, DS, HM with D and be aware of potential health risks related to simultaneous use of F, DS, HM and D.		
Outcome of the subject <i>Knowledge:</i> Improved knowledge of interactions of F, DS and HM with D. <i>Skills:</i> Competence to recognize interactions of F, DS and HM with D. Practical skills of methods and protocols of F, DS, HM and D interactions research.		
Content of the subject <i>Theoretical lectures</i> Interactions of F, DS and HM with D - the scope of the problem. F, DS, HM with D - differences and similarities. The kinetics and dynamics of F, DS, HM and D. The impact of nutritional status on the kinetics and dynamics of F, DS, HM and D. Food and drug absorption. Potentially beneficial interactions of F, DS and HM with D. Effect of drugs on the changes of nutritional status. Effect of treatment of cardiovascular and neurological diseases on nutritional status. Interactions of F, DS, HM and D involving folate. Interactions of F, DS, HM and D affecting the mineral status. Interactions of F, DS and HM with D during pregnancy and lactation, infancy and childhood and among the elderly. Interactions of F, DS and HM with D in sports. Interactions of F, DS and HM with D in patients with malignant diseases. Interactions of F, DS and HM with D in patients with chronic infections. Interactions of F, DS and HM with D in people with metabolic disorders: overweight and obesity, dyslipidemia, type 2 diabetes, metabolic syndrome. Interactions of F, DS and HM with D in patients with cardiovascular disease. Interactions of F, DS and HM with D in menopausal women. Interactions of F, DS and HM with D in people with osteoporosis. Interaction of F, DS and HM with D and the function of the central nervous system. Interactions of F, DS and HM with D in patients with disorders of the gastrointestinal system. Interactions of F, DS and HM with D in patients with disorders of the liver and renal dysfunction. Methods and protocols in research of interactions of F, DS and HM with D. <i>Practical lectures</i> Nutritional counseling for the prevention of interactions of F, DS and HM with D. Potentially beneficial interactions of F, DS and HM with D. Effect of therapy on nutritional status. Determination of nutrition status of different population groups and the effect of nutritional status on kinetics and dynamics of F, DS, HM and D. <i>In vitro, in situ, in silico, ex vivo and in vivo</i> methods for determination of interactions of foods, dietary supplements, herbal medicines and drugs.		
Recommended literature 1. Boullata J, Armenti V (ed). Handbook of drug-nutrient interactions. 2nd ed. New York, NY: Humana Press; 2010. 2. Williamson E и cap. (ed). Stockley's herbal medicines interactions. London, UK: Pharmaceutical Press; 2009. 3. Navarra T. The encyclopedia of vitamins, minerals and supplements. 2nd ed. New York, NY: Facts on File Inc; 2004.		
Number of active classes	Theory: 60	Practice: 45
Teaching methods: 1. Theoretical education. 2. Practical education (labs)		
Evaluation of knowledge (maximum number of points 100) lectures: 25 practices: 15 essay: 10 written exam: 40 oral exam: 10		