

<b>Study program:</b> Integrated academic studies of Pharmacy
<b>Type and level of the study program:</b> integrated academic studies
<b>Course title: INTERACTIONS OF FOODS, DIETARY SUPPLEMENTS AND HERBAL MEDICINES WITH DRUGS (PhVIFDH)</b>
<b>Teacher:</b> Budimka D. Novakovic, Neda S. Lakić, Jelena N. Jovičić Bata, Nebojša V. Kladar
<b>Course status:</b> compulsory
<b>ECTS Credits: 2</b>
<b>Condition: -</b>
<b>Course aim</b> Improving the knowledge of future pharmacists in the field of interaction of foods, dietary supplements, herbal medicines and drugs.
<b>Expected outcome of the course:</b> Improved knowledge of the following interactions: foods and dietary supplements, foods and herbal medicines, foods and drugs, dietary supplements and drugs, herbal remedies, herbal medicines and drugs. Mastering the art of providing professional and practical information about interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs. Noticing the possible interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs. Recognizing the health risks of concomitant use of foods, dietary supplements, herbal remedies, herbal medicines and drugs medicines.
<b>Course description</b> <i>Theoretical education</i> Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs - the scope of the problem. Foods, dietary supplements, herbal remedies, herbal medicines and drugs - differences and similarities. The kinetics and dynamics of foods, dietary supplements, herbal remedies, herbal medicines and drugs. The impact of nutritional status on the kinetics and dynamics of foods, dietary supplements, herbal remedies, herbal medicines and drugs. Food and drug absorption. Potentially useful interactions foods, dietary supplements, herbal remedies, herbal medicines and drugs. The effect of drugs on the changes of nutritional status. Effect of treatment of cardiovascular disease on nutritional status. Effect of treatment of neurological diseases on nutritional status. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs involving folate. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs that affect the mineral status. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs during pregnancy and lactation. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs during the period of infancy and childhood. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in the elderly. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in sport. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs and immune function. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in patients with malignant diseases. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in patients with chronic infections. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in people with metabolic disorders: overweight and obesity. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in people with metabolic disorders: dyslipidemia. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in people with metabolic disorders: type 2 diabetes. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in people with metabolic disorders: the metabolic syndrome. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in patients with cardiovascular disease. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in menopausal women. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in people with osteoporosis. Interaction of foods, dietary supplements, herbal remedies, herbal medicines and drugs and the function of the central nervous system. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in patients with disorders of the gastrointestinal system. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in patients with disorders of the liver. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in patients with renal dysfunction. Nutritional counseling for the prevention of interactions of foods , dietary supplements, herbal remedies, herbal medicines and allopathic medicines  <i>Practical education: exercises, other forms of education, research related activities</i> International and national regulation of foods, dietary supplements, herbal remedies and herbal medicines. Categorization. Determination of nutrition status of different population groups. Potentially useful interaction of foods, dietary supplements, herbal remedies, herbal medicines and drugs. Effect of therapy on nutritional status. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in pregnancy. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs and immune function. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in malignant and chronic diseases. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in metabolic disorders. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in metabolic diseases. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in cardiovascular diseases. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in osteoporosis. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in nervous system disorders. Interactions of foods, dietary supplements, herbal remedies, herbal medicines and drugs in gastrointestinal disorders. Interaction of foods, dietary supplements, herbal remedies, herbal medicines and drugs in liver problems.
<b>Literature</b> <i>Compulsory</i> 1. Boullata J, Armenti V, editors. Handbook of drug-nutrient interactions. 2nd ed. New York, NY: Humana Press, 2010.

2. Williamson E, Driver S, Baxter K, editors. 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.
4. Blumenthal R. The Complete German Commission E Monographs. American Botanical Council, Austin, 1999.

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<b>Number of active classes</b>				Other:
Lectures:	Practice:	Other types of teaching:	Research related activities:	
45	15			
<b>Teaching methods</b>				
<b>Student activity assessment</b> (maximally 100 points)				
<b>Pre-exam activities</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>	
Lectures	10	Written	50	
Practices	20	Oral		
Colloquium				
Essay	20			