

Study program : Integrated academic studies for a Master of Pharmacy
Type and level of studies: Integrated academic studies
<b>Course unit: Nutrition in Health and Disease</b>
<b>Teacher in charge : Prof. Dr Nela Djonovic</b>
Language of instruction : English language
ECTS: 4 points
Prerequisites: The student must be registered in the fifth block Graduate academic study program -Integrated studies for a master of pharmacy.
Semester <i>Winter Semester</i>
<b>Course unit objective</b> To enable students to understand the importance of nutrition both in health and in disease and its place in the processes that affect human health;introduction to the principles of a normal diet and diseases that are caused by improper diet; Introduction to the basic problems of dietetics and clinical nutrition; exploring the impact of physical activity on health and prevention of disease.
<b>Learning outcomes of Course unit</b> The knowledge that students will acquire after mastering program: Knowledge of the basic principles of a normal diet; knowledge of the importance of nutrition for health people; knowledge of all the food groups and their roles in the body; basic knowledge of clinical nutrition; basic knowledge of dietetics, with making menus for different categories of healthy and sick people; knowledge of hospital diet; knowledge of diseases that are caused by insufficient nutrition or its individual factors (vitamins, minerals, proteins ...); knowledge of the diseases which result from excessive nutrition; knowledge of the impact of physical activities on human health and disease prevention; knowledge of the mechanisms of fatigue, tiredness and fatigue on health. The skills that students will acquire after mastering programs: Skill basic search database on the Internet; solving skills practical problems in the field of nutrition; skills of interpreting and applying different types of diets; skills calculating the daily nutritional needs materials for different categories of sick and healthy people, the skills of making menus for individual and collective feeding different age <ul style="list-style-type: none"> <li>• category, skill recognition of eating disorders, skills assessment of food safety.</li> <li>• The attitudes that students will gain after overcoming the program: The most important thing is to preserve people's health; Proper nutrition is the first prerequisite for the preservation and</li> <li>• health promotion; improper diet is the most important risk factor in the modern world; physical activity significantly acts on disease prevention.</li> </ul>
<b>Course unit contents</b>  <i>Theoretical classes</i> Theoretical instruction includes an introduction to nutrition, (the importance of nutrition), legislation in Serbia in the field of nutrition and food security, energy needs and nutritional importance of nutrients (energy, calculate daily energy needs, carbohydrates, fats, proteins, water), macronutrients- carbohydrates, fats, proteins (chemical composition, metabolism, role, regulation, recommended daily intake of importance), the importance of mineral substances in the diet (the role and the daily needs of mineral substances: sodium, potassium, calcium, magnesium, phosphorus, iodine, chlorine, fluorine, bromine, cobalt, manga, selenium, iron, olovocink, chromium, copper), the role of vitamins in the diet (and the importance of daily plugs vitamins A, D, E, K, C, and B group vitamins) vitamin deficiency, hypovitaminosis, the impact of mega doses of trace elements in human health (oral and parenteral administration of large doses of multiple daily requirement of vitamins and minerals), foods (foods of plant origin: cereals and cereal products, fruits and vegetables, foods of animal origin: and meat products, milk and dairy products, fish products, eggs; fats and oils), food additives, food safety, food contamination-chemical agents, heavy metals, pesticides, antibiotics, hormones, additives, mycotoxins, genes in food), Quality Systems, Food Safety Act, food poisoning, food poisoning and toxic infections, microbial contamination of food, ergotism, the basic principles of proper nutrition, water, nutrition, supplements, dietary recommendations for proper nutrition (implementation of recommendations for nutrition, diet planning for different kategotije population, nutrition for health promotion and disease prevention), methods of assessment of the situation, nutritional status, nutrition of young children, pregnant women and nursing mothers diet, nutrition, old people, athletes diet, nutrition pyramid (World Health organizations, as well as the recommendations of the FDA), the energy density of meals, eating disorders, and nutritional deficiency diseases due to insufficient entries, macronutrient - protein-energy deficiency, malnutrition, nutritional allergies,

<p>obesity (etiology, genetic factors, factors of food, cultural factors, physical activity, social factors, other factors, obesity treatment, prevention of obesity), a guide for the treatment of obesity disorders behavior in the diet (Anorexia Nervosa, Bulimia Nervosa), teamwork in the treatment of eating disorders, nutrition and chronic non-communicable diseases (Nutrition and cardiovascular disease, malignant disease, a disorder of serum fat), metabolic syndrome H, FDA Guide for cardiovascular nutrition patients, diet and diabetes (nutrition goals with diabetes, diet therapy of diabetes), introduction to clinical diet-related certain diseases, parenteral nutrition, physical activity and its impact on health and disease prevention (recreational physical activity, training, sports, the role of physical activity in the growth and development of children, tiredness, fatigue, exhaustion), diet and physical activity (sports nutrition principles and amateurs).</p> <p><i>Practical classes</i> Historical overview of the development of principles of nutrition in a variety of world cultures and religions. Introduction to the legal norms. Calculating energetic requirements for different categories of the population - children, teenagers, pregnant women, nursing mothers, the working population, easy physical work, heavy physical work, old people. Energy and biological value of food. Vitamin deficiency. Hypervitaminosis. Sampling of foodstuffs. Falsification of food. HACCP system.</p> <p>Microbiological and chemical food safety-norms and regulations. Testing (poll) the individual, collective and family nutrition. Assessment diet and nutritional status. Functional and anthropometric ispitivanja. Indeks weight. The preparation of daily meals. Probiotics. Prebiotics. Nutraceuticals. Nutritional disorders (nutritional deficiency and diseases caused by insufficient intake of certain micronutrients). Nutritional disorders (diseases and nutritional deficiency due to insufficient intake of macro - protein-energy deficiency, malnutrition).</p> <p>Treatment of obesity. Hypocaloric child. Hypercaloric child. Diet therapy of eating disorders. Search sites on the Internet translation of a document, at its option, related to nutrition cardiovascular patients. : Practical implementation of recommendations for feeding patients diabetes. The preparation of daily meals for patients with type 2 diabetes Parenteral nutrition-practical application. The use of supplements in the diet athletes. Planning nutrition for active sportsmen. Physical Activity and Health Essay</p>				
<b>Literature</b>				
Oxford Textbook of Public Health, Fifth Edition, ISBN-13: 9780199218707, Oxford University Press, 2009.				
<b>Number of active teaching hours 60+30</b>				<b>Other classes</b>
Lectures:	Practice:	Other forms of classes Mentoring system 60	Independent work:30	
<b>Teaching methods</b>				
<b>Examination methods ( maximum 100 points)</b>				
<b>Exam prerequisites</b>	<b>No. of points:</b>	<b>Final exam</b>	<b>No. of points:</b>	
Student's activity during lectures	30	oral examination		
practical classes/tests		written examination	70	
Seminars/homework		.....		
Project				
Other				
<b>Grading system</b>				
<b>Grade</b>	<b>No. of points</b>	<b>Description</b>		
10	95-100	Excellent		
9	85-94	Exceptionally good		
8	75-84	Very good		
7	65-74	Good		
6	56-64	Passing		
5	≤55	Failing		

(Table 5.2) Course unit description