

<b>Study program:</b> Integrated academic studies in Pharmacy			
<b>Type and level of the study program:</b> Integrated academic studies			
<b>Course title: Safety of supplements consumption in sports (PhV-SUPPL)</b>			
<b>Teacher:</b> Vladimir D. Pilija, Budimka I. Novakovic			
<b>Course status:</b> elective			
<b>ECTS Credits: 3</b>			
<b>Condition: -</b>			
<b>Course aim</b>			
The programme introduces students with sport supplementation and legal regulation, rational sports supplements, risks of abuse and unwanted effects for the care of athletes and recreational players.			
<b>Expected outcome of the course:</b>			
This programme will introduce students with action mechanisms of dietary supplements and its rational use, risks of the use of unauthorized substances by athletes and recreational players. Furthermore, the programme allows the students to understand better doping resources, taking biological materials for chemical and toxicological analysis due to its legal regulations and regulation the use of dietary supplements in sports.			
<b>Course description</b>			
<i>Theoretical education</i>			
<ul style="list-style-type: none"> <li>- Dietary supplements - definition, division, legal regulation</li> <li>- Energy drinks</li> <li>- Vitamins. Minerals and phytochemicals</li> <li>- Natural substances containing plant components</li> <li>- Proteins ("for the mass", whey proteins and plant proteins)</li> <li>- Amino acids</li> <li>- Enzymes</li> <li>- NO reactors</li> <li>- Creatine</li> <li>- Fat burners and stimulants (L-carnitine, caffeine and clenbuterol)</li> <li>- Carbohydrates: glucosamine, chondroitine sulphate, glycerol</li> <li>- Natural hormone stimulants (tribulus terrestris)</li> <li>- Hormones (anabolic steroids and GH)</li> <li>- Doping control and list of prohibited doping drugs in sports</li> <li>- Healthy safety of dietary supplements</li> </ul>			
<i>Practical education: exercises, other forms of education, research related activities</i>			
Independent drafting of nutrition for recreational and professional athletes regarding to the goals set in sports activities. Independent selection and prescription of dietary supplements depending on gender, age and eventual diseases in recreational sport activities.			
<b>Literature</b>			
<i>Compulsory</i>			
1. Smolin LA, Grosvenor BM, editors. Nutrition for sports and exercise. 2nd ed. Hoboken, NJ: John Wiley&Sons; 2010.			
<i>Additional</i>			
1. Dorfman L. Nutrition in exercise and sports performance. In: Mahn K, Raymond LJ editors. Food&the nutrition care process. 14th ed. St. Louse (Mo): Elsevier INC; 2017. pp.426-55.			
2. Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: nutrition and athletic performance. Can J Diet Pract Res. 2016;77(1):54.			
3. Williams MH. Sports Nutrition. In: Ross CA, Caballero B, Cousins RJ, Tucker KL, Ziegler TR, editors. Modern nutrition in health and disease. 11th ed. Baltimore, US: Lippincott Williams & Wilkins; 2014. p. 1559-63.			
<b>Number of active classes</b>			<b>Other:</b>
Lectures: 15	Practice: 30	Other types of teaching:	Research related activities:
<b>Teaching methods</b>			
<b>Student activity assessment (maximally 100 points)</b>			
<b>Pre-exam activities</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Lectures	20	Written	60
Practices	20	Oral	
Colloquium		.....	
Essay			