

Course Title	Nutrition and Nutrition Supplements Technology				
Course Code	PHA704				
Course Category	Postgraduate (Master)				
Level	Compulsory				
Year / Semester	1 st year, (2 nd semester)				
Teacher's Name	S. Papoutsou, G.A.Karikas, T. Karydas, M. Malamatari				
ECTS	7	Lectures / Week	2	Laboratory / week	-
Aim and objectives of the course	<p>The course seeks to educate students on the subject of nutritional supplements. In detail, students will be taught the basic principles of the science of nutrition and by what criteria health scientists are asked to recommend additional intake of active nutrients in specific physiological conditions (sports, pregnancy, constipation, etc.), or in pathological conditions (dysphagia), etc. The course analyzes the various supplements in terms of their composition and their marketable forms. In addition, functional foods are analyzed in terms of their types and usefulness, as well as how they can replace some dietary supplements. In order for students to be able to understand and learn the above, references will be made to epidemiological data concerning the most common pathological conditions in the population, such as morbid obesity, metabolic syndrome, osteoporosis, etc. Finally, special emphasis will be placed on the potential interactions of dietary supplements, with a prescription or over-the-counter medications, as well as basic legislation governing the marketing of dietary supplements.</p>				
Learning outcomes	<p>Upon completion of the course students will be able to:</p> <p>(a) Recognize the subject of nutrition science and in what situations dietary supplements are useful</p> <p>(b) Analyze the principles of proper eating behavior</p> <p>(c) Explain the role and properties of the various nutrients contained in the various dietary supplements e.g. collagen, BCAAs, inositol, psyllium, etc.</p> <p>(d) Analyze the technology of nutritional supplements in terms of ingredients, the time of absorption of nutrients, the time of action of</p>				

	<p>the ingredients, and the dosage required.</p> <p>(e) Evaluate the literature on the study of newer supplements</p> <p>(f) Recognize possible interactions with prescription drugs</p> <p>(g) Evaluate when supplements can aid in the primary prevention of chronic diseases, when they can replace medication in the secondary prevention stage and how and if they can be combined with medication in some pathological conditions.</p> <p>(h) Describe the basic legal framework concerning food supplements</p>		
Pro-required	-	Co-required	-
Course content	<ul style="list-style-type: none"> • Detailed introduction to food groups and nutrients. • Brief description of the process of clinical nutritional evaluation at individual and group level • Basic rules of nutrition education • Principles of the Mediterranean Diet • Types of supplements • Active forms, composition, form, and dosages of dietary supplements • Physiological conditions in which taking dietary supplements is necessary or helpful: pregnancy, breastfeeding, intense exercise in athletes, vegetarianism, monophagia, constipation, menopause, irritable bowel, etc. • Chronic diseases or pathological conditions for which diet is part of treatment and specific supplements can help in the symptoms or the course of the disease: osteoporosis, iron deficiency anemia, megaloblastic anemia, diabetes mellitus II, hyperlipidemia, gastrectomy, autoimmune, etc. • Functional foods: what they are, what they help with, and when they can replace or be combined with dietary supplements • Technology of preparation of food supplements (nanopreparations) • Interactions with prescription drugs • Supplement legislation 		
Teaching methods	<p>Teaching Methods The theoretical part of the course is offered through lectures and discussions. Discussion with students includes questions / answers, pros / cons, role play and case studies. In addition, recent research findings and reviews are included. Detailed notes with PowerPoint are used in teaching.</p>		
Bibliography	<p>Bibliography in Greek:</p> <ul style="list-style-type: none"> • Sflomos Konstantinos. Biofunctional Foods, Supplements and 		

	<p>Nutritional Supplements. Tsotras Publications, 2019</p> <ul style="list-style-type: none"> • Nutritional supplements, G. Manousakis, 2021 <p>Bibliography in English:</p> <ul style="list-style-type: none"> • K. Berginc, S. Kreft. Dietary Supplements: Safety, Efficacy and Quality. Woodhead Publishing, 2015 • Nutraceuticals: Efficacy, Safety and Toxicity (2016) by Ramesh C. Gupta (Editor) • Prescription for Nutritional Healing, Fifth Edition: A Practical A-to-Z Reference to Drug-Free Remedies Using Vitamins, Minerals, Herbs & Food (2011) by Phyllis Balch (Author) • Antioxidants. Edited by Emad Shalaby, 2019 • Newer Articles in English (original papers / meta-analysis and review papers)
Evaluation	<p>1. <u>Final examination (60%)</u></p> <p>The final exam is a written exam and is scheduled during the exam period at the end of the semester. The subject matter is determined by the teacher and communicated in a timely manner to the students.</p> <p>2. <u>Mid-term examination (25%)</u></p> <p>The midterm exam is a written exam and is scheduled within the semester (6th - 8th week of courses). The subject matter is determined by the teacher and communicated in a timely manner to the students.</p> <p>3. <u>Submission - Presentation of project (15%)</u></p> <p>This work is individual or group and concerns the elaboration of a small-scale research project. Students are expected to design and implement small-scale research, (including literature review, methodology, presentation of results and discussion) and present their research to their classmates as part of the course and assessment.</p>
Language	Greek / English