

Course title	Parapharmaceutical Products				
Course Code	PHRM218				
Course Type	Theoretical				
Level	Diploma				
Year / Semester	2nd Year / 3rd Semester				
Teacher's Name	Dr. Sophocleous Xanthi				
ECTS	4	Lectures / week	2	Laboratories / week	0
Course Purpose and Objectives	The aim of the course is to provide the necessary understanding of the available categories of the most basic parapharmaceutical products: medical devices, food supplements and cosmetics, so as to cover the basic information for their proper use and operation.				
Learning Outcomes	<p>Upon completion of the course, students are expected to:</p> <p>Knowledge</p> <ol style="list-style-type: none"> 1. Know the way of operation, the use and the categories of medical devices. 2. Explain the differences in measurement accuracy in each category of medical device. 3. Name the nutrients and their relationship to the normal functioning of the body, the energy equilibrium and the regulation of body weight. 4. Explain what food supplements are and their categories, but also the reasons that lead to the consumption of food supplements and their necessity. 5. Name the basic ingredients of cosmetics. 6. Be aware of the basic provisions of the current legislation governing each of the products studied. <p>Skills</p> <ol style="list-style-type: none"> 7. Distinguish cosmetics for the skin, for the eyes and lips, for the oral cavity, for nails and hair. 8. Explain how the lack of nutrients affects the body. <p>Competences</p> <ol style="list-style-type: none"> 9. Synthesize their knowledge in the field of parapharmaceuticals and acquire critical thinking on how they operate, use and categories. 				
Prerequisites	-	Required:	-		
Course Content	<p><u>Medical devices:</u></p> <ul style="list-style-type: none"> • Introduction to medical devices and history of medical technology. • Essential legislative provisions applicable in Europe (CE) for medical devices. • Thermometers: types of thermometers, use and accuracy in measurements. • Stethoscopes: types of stethoscopes, use. • Headphones: types of headphones, mode of operation and suitability. • Otoscopes • Blood pressure monitors: types of sphygmomanometers, use and accuracy in measurements. 				

	<ul style="list-style-type: none"> • Calipers: types of fat meters, use and accuracy in measurements. • Glucose measuring devices: categories and mode of operation, use and accuracy of measurements. • Oximeters: types of oximeters, use and mode of operation. • Spirometers: categories, use and mode of operation. • Nebulizers: categories, use and mode of operation. <p><u>The Commission's annual legislative programme</u></p> <ul style="list-style-type: none"> • Major macronutrients: carbohydrates, lipids and proteins, delivery of nutrients and their storage, use of energy by the human body, as well as control of the energy equilibrium. • The importance of micronutrients in normal cell function, and water balance - electrolyte regulation. Health consequences due to micronutrient deficiencies. • Main categories of food supplements. • Cases of organisms that need to take food supplements. • Risks of taking food supplements. • Legislative provisions. <p><u>Cosmetics</u></p> <ul style="list-style-type: none"> • Cosmetic ingredients (surfactants, moisturizers, preservatives, antioxidants, dyes, odor enhancers, etc.). • Cosmetics for the skin (creams, face masks, powders, sunscreens). • Cosmetics for the eyes and lips (eye makeup, eye shadows, lipsticks). • Cosmetic preparations for the oral cavity (toothpastes, oral solutions). • Nail cosmetics (varnishes, dyes, hardeners). • Hair cosmetics (hair anatomy elements, shampoos, hair dyes, hair extensions, hair care products). • Basic legislative provisions for cosmetics, testing and approval process for marketing.
<p>Teaching Methodology</p>	<p>The course content will be taught through: Power Point presentations, guided discussions with the active participation of students, individual and team work by students and the use of a variety of audiovisual media and other teaching tools as required for the delivery of each module.</p>
<p>Bibliography</p>	<p><u>Greek Bibliography</u></p> <ul style="list-style-type: none"> • Φαρμακευτικός κόσμος (2017). <i>Φαρμακευτικός κόσμος : Ιατροτεχνολογικά προϊόντα: ο ρόλος τους στη δημόσια υγεία και η θέση τους στο ελληνικό φαρμακείο</i>. Τάκης Χονδρογιάννης. ISSN: 1108-2003 • Σεργιάδης, Γ. Δ. (2009), <i>Βιοϊατρική τεχνολογία</i>, University Studio Press, ISBN 978-960-12-1774-1. • Φαρμακευτικός κόσμος (2017). <i>Φαρμακευτικός κόσμος : Ιατροτεχνολογικά προϊόντα: ο ρόλος τους στη δημόσια υγεία και η θέση τους στο ελληνικό φαρμακείο</i>. Τάκης Χονδρογιάννης. ISBN: 1108-2003 • Πέτρου, Η. (2018). <i>Τροφή και υγεία</i>. Αναγνώστης, ISBN 978-618-5287-23-8. • Μανουσάκης Γ. Ε., (2008). <i>Συμπληρώματα διατροφής: όλα όσα πρέπει να ξέρετε</i>, Ιδιωτική Έκδοση, Αθήνα, ISBN: 978-960-930525-9 • Θεοχάρους, Σπύρος Λ. (2013) <i>Εργαστηριακός οδηγός χημείας και κοσμητολογίας</i>, KES College, ISBN: 978-9963285266.

	<ul style="list-style-type: none"> • Συλλογικό έργο (2016). <i>Εφαρμοσμένη Κοσμητολογία: Δερματοκαλλυντικά</i>, Παρισιάνου Α.Ε., Αθήνα, ISBN: 978-960-583-151-6. <p>English Bibliography</p> <ul style="list-style-type: none"> • Robert R. Harr (2019). <i>Medical Laboratory Science Review</i>, 5th Edition, F.A. Davis Company, ISBN: 978-0803668270. • Frazier, K. (2015). <i>Nutrition facts</i>, Rockridge Press, ISBN: 9781623156114. • Whitney, E. (2013). <i>Understanding Nutrition</i>, Cengage/Wadsworth, ISBN: 978-1-133-58752-1. • Mason, P. (2012). <i>Dietary Supplements</i>, Pharmaceutical Pr, 4 edition, ISBN: 978-0853698838. • Kazutami, S., Lochhead, R. Y., Maibach, H. I., Yamashita, Y. (2017). <i>Cosmetic Science and Technology: Theoretical Principles and Applications</i>. Amsterdam, Netherlands. ISBN: 9780128020050. Elsevier. EBSCOHost.
<p>Assessment</p>	<ul style="list-style-type: none"> • Attendance and participation: 10% • Assignments / Essays: 20% • Midterm Written Examination: 20% • Final Written Examination: 50% <p><i>Written examination has two parts that are examined as part of one exam paper. The first part includes closed-ended questions, such as multiple choice questions, true or false, matching exercises, complete the gaps exercises, etc. The first part is usually worth 40% - 50% of the total marks of the exam paper. The second part includes open-ended questions that are meant to assess the students' abilities to analyse, reflect, explain, recall etc. The second part is usually worth 50% - 60%. The total marks of the exam paper are 100.</i></p>
<p>Language</p>	<p>Greek or English</p>