

<b>Course title</b>	<b>Pharmaceutical chemistry</b>				
<b>Course Code</b>	<b>CHEM200</b>				
<b>Course Type</b>	<b>Theoretical</b>				
<b>Level</b>	<b>Diploma</b>				
<b>Year / Semester</b>	<b>2<sup>nd</sup> Year / 3<sup>rd</sup> Semester</b>				
<b>Teacher's Name</b>	<b>Tomouzou Chrysi</b>				
<b>ECTS</b>	6	<b>Lectures / week</b>	3	<b>Laboratories / week</b>	0
<b>Course Purpose and Objectives</b>	The aim of the course of Pharmaceutical Chemistry is to familiarize students with the basic chemical characteristics of substances used in pharmaceutical science.				
<b>Learning Outcomes</b>	<p>Upon completion of the course, students are expected to:</p> <p><b>Knowledge</b></p> <ol style="list-style-type: none"> <li><b>List</b> the main chemical characteristics of compounds groups used in pharmacy.</li> <li><b>Explain</b> the chemical basis of antibiotics, alkaloids, vitamins, drugs for diseases of the digestive, nervous and circulatory systems, analgesics and steroids.</li> </ol> <p><b>Skills</b></p> <ol style="list-style-type: none"> <li><b>Analyse</b> the main properties and characteristics of trace elements.</li> </ol> <p><b>Competences</b></p> <ol style="list-style-type: none"> <li><b>Synthesize</b> their knowledge in the field of pharmaceutical chemistry and acquire critical thinking on the levels of action and use of drugs.</li> <li>Be able to <b>combine</b> the so-called knowledge and skills acquired so far with those presented in this course.</li> </ol>				
<b>Prerequisites</b>	<b>General Chemistry CHEM100</b>	<b>Required:</b>	-		
<b>Course Content</b>	<ul style="list-style-type: none"> <li>• Introduction to Pharmaceutical Chemistry</li> <li>• Origin of pharmaceutical chemical compounds</li> <li>• Pharmaceutical Chemistry: basic concepts and definitions, targets of pharmaceutical products, development of intermolecular interactions</li> <li>• Composition (guide compound, pharmaceutical component)</li> <li>• Stereoisomerism in drugs</li> <li>• Antibiotics: Classification</li> <li>• Drugs for circulatory system diseases</li> <li>• Steroidal, non-steroidal anti-inflammatory and peripheral/central analgesic drugs</li> <li>• Drugs of neurodegenerative diseases and local anaesthetics</li> <li>• Antidepressants, anxiolytics, sedatives, hypnotics and antiepileptic drugs</li> <li>• Steroids</li> <li>• Chemistry of natural products</li> <li>• Alkaloids – Vitamins</li> <li>• Trace elements in human health</li> </ul>				
<b>Teaching Methodology</b>	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.				
<b>Bibliography</b>	<b>Greek Bibliography</b>				

	<ul style="list-style-type: none"> <li>• Πουλή, Ν. (2018). <i>Μαθήματα φαρμακευτικής χημείας: Κατασταλτικά ΚΝΣ - ψυχοφάρμακα, αντιισταμινικά, βιταμίνες, αντιβακτηριακά φάρμακα</i>, Παρισιάνου Α.Ε., ISBN 978-960-583-252-0.</li> <li>• Nahar, L. (2015). <i>Στοιχεία χημείας για φαρμακοποιούς: Γενική χημεία, οργανική χημεία και χημεία φυσικών προϊόντων</i>, Παρισιάνου Α.Ε., ISBN 978-960-583-032-8.</li> <li>• Συλλογικό Έργο (2017). <i>Οργανική χημεία</i>, Utopia, Αθήνα, ISBN: 978-618-51732-0-3.</li> <li>• Μανουσάκης, Γ. (2015). <i>Χημεία Ιατρικών Επιστημών</i>, Εκδόσεις Κυριακίδης, ISBN: 978-960-599-012-1</li> <li>• Ρέκκας, Α.Ε., Κουρουνάκης, Π. Ν. (2015). <i>Φαρμακευτική χημεία: φάρμακα που δρουν στο κεντρικό νευρικό σύστημα</i>, Φωτεινή Χατζηπάντου, ISBN: 978-960-98594-7-9.</li> </ul> <p><b>English Bibliography</b></p> <ul style="list-style-type: none"> <li>• Faruk Khan M. O., and Philip, V. (2018). <i>Fundamentals of Medicinal Chemistry and Drug Metabolism</i>. Sharjah, UAE : Bentham Science Publishers. ISBN: 9781681086880. <b>EBSCOHost</b></li> <li>• Davis, A., and Ward, S. E. (2015). <i>The Handbook of Medicinal Chemistry: Principles and Practice</i>. Cambridge: Royal Society of Chemistry. ISBN: 9781849736251. <b>EBSCOHost</b></li> <li>• McMurry, J., Ballantine, D. S. et al (2010). <i>Fundamentals of general, organic, and biological chemistry</i>. 6th<sup>Edition</sup>. Pearson Prentice Hall, Upper Saddle River, NJ, ISBN: 978-0-13-815228-4.</li> </ul>
<p><b>Assessment</b></p>	<ul style="list-style-type: none"> <li>• Attendance and participation: 10%</li> <li>• Assignments / Essays: 20%</li> <li>• Midterm Written Examination: 20%</li> <li>• Final Written Examination: 50%</li> </ul> <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><b>Language</b></p>	<p>Greek or English</p>