

## Course description

General information about the course	
<b>1. Major of study:</b> Pharmacy	<b>2. Study level:</b> uniform Master's studies
	<b>3. Form of study:</b> stationary
<b>4. Year:</b> II or III	<b>5. Semester:</b> III, IV or V, VI
<b>6. Course name:</b> Pharmaceutical chemistry	
<b>7. Course status:</b> mandatory	
<b>8. Name of Department, mailing address, e-mail:</b> Department of Pharmaceutical Chemistry, Jagiellońska 4, 41-200 Sosnowiec, Poland, chemlek@sum.edu.pl	
<b>9. Course contents:</b> The aim of the course is to familiarize students with the anatomical-therapeutic-chemical classification of drugs (ATC); the relationship between the chemical structure, physicochemical properties mechanisms of action and use of the significant groups of drugs e.g. drugs acting on nervous system, analgesics, drugs used in disorders of the endocrine, pulmonary, cardiovascular and gastrointestinal system, as well as antimicrobials and anticancer agents. Moreover, the students will gain knowledge and skills in the area of basic methods used in the quality control of substances and medicinal products, including qualitative and quantitative analysis of medicinal substances in various forms of drugs, using classical and instrumental methods.	
<b>10. Number of hours for the course</b>	<b>60</b>
<b>11. Number of ECTS points for the course</b>	<b>4</b>
<b>12. Forms and topics of classes</b>  <b>12.1. Seminars</b> - Drug targets. - Drug nomenclature. - Drug discovery, design and development. - Pharmaceutical chemistry of the significant groups of drugs e.g. drugs acting on nervous system, analgesics, drugs used in disorders of the endocrine, pulmonary, cardiovascular and gastrointestinal system, as well as antimicrobials and anticancer agents.	<b>Number of hours</b>  <b>30</b>
<b>12.2. Laboratory classes</b> - Qualitative analysis of selected drugs. - Quantitative analysis of pharmaceutical substances using various methods, e.g. spectrophotometry, chromatography, complexometry, alkalimetry, acidimetry. - Quantitative analysis of selected medicinal substances in various drug products e.g. topical drug products, tablets, parenteral drug products.	<b>30</b>
<b>13. Readings</b> <ul style="list-style-type: none"> <li>Graham L. Patrick. An Introduction to Medicinal Chemistry. Fifth Edition. Oxford University Press, 2013</li> <li>David E. Golan, Ehrin J. Armstrong, April W. Armstrong. Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy. Fourth Edition. Wolters Kluwer, 2017</li> <li>Scientific articles</li> </ul>	
<b>14. Detail evaluation criteria</b> In accordance with the recommendations of the inspection bodies Completion of the course – student has achieved the assumed learning outcomes Detail criteria for completion and evaluation of the course are specified in the course regulations	