

Adopted by the Department Council on 15.02 2024/Protocol № 1
Approved by the Faculty Council on 27.03. 2024/Protocol № 3

ACADEMIC STANDARD FOR THE COURSE

LATIN LANGUAGE AND PHARMACEUTICAL TERMINOLOGY **(FOR THE SPECIALTY OF PHARMACY)**

1. Course objectives

The course "Latin language and pharmaceutical terminology" as part of the pharmacy students' curriculum at Medical University of Plovdiv introduces students to the specialised terminology. It provides an opportunity to acquire knowledge in Latin grammar, to learn terms from the disciplines pharmacology, pharmacognosy, pharmaceutical botany, chemistry, technology of dosage forms. The course includes terms from anatomy, clinic, pathology as independent use and in the context of the names of medicinal products. The course examines the legal framework on how to list drugs in prescriptions and with emphasis on the parts of the prescription in Latin. Students are introduced to the current content of the European Pharmacopoeia. Latin language training builds students' ability to translate prescriptions from Latin into Bulgarian and vice versa, to know the Latin names of plants according to their scientific classification in botany, to use correctly the names of medicinal products, understand the names of chemical elements and compounds, to assimilate the terminological elements of Greek origin, so that they can independently translate and construct complex terms.

When the course in Latin is completed, students should be able to:

- use the lexical minimum that serves the needs of other disciplines.
- master the rules of Latin grammar and work with specialised terminology (from the fields of pharmacology, pharmacognosy, pharmaceutical botany, technology of dosage forms).
- know the principles of formation of complex terms in the language of pharmacology, clinic, therapy.

- understand and construct complex terms.
- know the legal framework in the Republic of Bulgaria regarding the content of the prescription form.
- read and understand prescriptions.
- understand the terms of pharmacognosy and pharmaceutical botany.

2. SYLLABUS

Year 1, semester 1

№	TOPICS	Academic hours	Date
1.	Introduction into the course in Latin. History of pharmaceutical and medicine terminology. Alphabet and pronunciation.	2 h	
2.	Summary of the phonetic, orthographic and orthoepic peculiarities of the Latin language.	2 h	
3.	The verb. Indicative mood, active and passive voice – Indicativus praesentis activi et passivi of the verbs from the four conjugations.	2 h	
4.	Imperative mood, active voice – Imperativus praesentis activi.	2 h	
5	Written examination (test) of the verb, nouns and adjectives of the first and second declension, terms of ancient Greek origin.	2 h	

10.	<p>Third declension nouns – general characteristic and particularities by groups.</p> <p>Third consonant declension nouns.</p> <p>Nouns of ancient Greek origin (III Greek declension).</p> <p>Location adjectives, formed with suffixes -ior and -ius.</p> <p>Names of salts of third consonant declension formed with suffixes -as, -atis; -is, itis.</p>	2h	
11.	<p>Exercises on third consonant declension nouns and adjectives.</p>	2 h	
12.	<p>Third vocal declension nouns.</p> <p>Nouns of ancient Greek origin (III Greek declension).</p>	2 h	
13.	<p>Third mixed declension nouns.</p> <p>Terms of ancient Greek language corresponding to third mixed declension nouns in Latin.</p>	2 h	
14.	<p>Third declension adjectives.</p> <p>Present Participle. Use of the present participle in the names of group of drugs and in names of plant species.</p>	2 h	
15.	<p>Revision of first, second and third declension nouns and adjectives. Exercises.</p>	2 h	

TOTAL: 30 academic hours

Year 2, semester 2

№	TOPICS	Academic hours	Date
1.	<p>Revision of verb, nouns, adjectives, participles.</p> <p>Degrees of comparison of adjectives.</p> <p>Use of degrees of comparison in names of plant species, in pharmacology and clinic.</p>	2 h	
2.	<p>Fourth declension nouns.</p> <p>Terms of ancient Greek language corresponding to fourth declension nouns in Latin.</p>	2 h	
3.	<p>Fifth declension nouns. Terms of ancient Greek language corresponding to fifth declension nouns in Latin.</p> <p>Revision of declensions.</p>	2 h	
4.	<p>Numerals.</p> <p>Latin and Greek prefixes with numeral meaning and their use in terminology.</p>	2 h	
5.	<p>Written examination (test) on first, second and third declension nouns, adjectives, participles.</p>	2 h	
6.	<p>Types of prescriptions.</p> <p>Current legislation in the Republic of Bulgaria regarding medicinal products and the methods for their prescription. European pharmacopoeia.</p>	2 h	
7.	<p>Names of drugs. Definition for drug product. Types of names of the drug products. Classification of drugs into groups according to their mode of action.</p>	2 h	

8.	Chemical nomenclature (names of chemical elements and compounds). Acids, oxides , salts. Examples in prescriptions.	2 h	
9.	Botanical nomenclature. Plant systematics. Generic (genus) name. Specific name. Pharmacognosy terms. Names of plants and herbal products in the European Pharmacopoeia.	2 h	
10.	Solid dosage forms – I. Powders, tablets, dragées (sugarcoated pills/capsules). II. Capsules, granules, pilules, mixtures. Prescription examples.	2 h	
11.	Liquid dosage forms for oral and external administration. Solution, mixture, emulsion, suspension. Prescription examples. Liquid dosage forms obtained as aqueous infusions of dried plant materials. Prescription examples.	2 h	
12.	Injectable liquid dosage forms. Preparations for parenteral administration. Prescription examples.	2 h	
13.	Semi-solid dosage forms. Inhalational dosage forms. Prescription examples.	2 h	
14.	Revision of verbs, nouns and adjectives, participles as grammatical features. Revision of prescription, of names of drugs, of botany and pharmacognosy terms. Revision of terms of Greek origin.	2 h	
15.	Practice for the final exam. Types of exercises – explanations of the tasks and practice.	2 h	

TOTAL: 30 academic hours

3.Prerequisites

The course is conducted with students at beginner level. Previous knowledge of Romance languages aids in the preparation in Latin.

Knowledge of another foreign language is also a good prerequisite for mastering Latin and medical terminology, because students relate new concepts to familiar content.

4. Academic resources

Latin lecturers with a Master's and/or Bachelor's degree in classical philology.

5. Resources and facilities

Interactive whiteboard, language lab. Internet connection, wall monitor, multimedia. Elearning platform provided by Medical University of Plovdiv.

6. Lectures - none

6. Laboratory practicals - none

7. Seminars: 60 academic hours of seminars

- Acquiring knowledge about nouns, adjectives, participles, numerals in the Latin language and their use in terminology.
- Acquiring knowledge about the verb in Latin and the use of verb forms in the prescribing.
- Mastering terms from pharmacology, pharmacognosy, botany, pathology, anatomy.
- Skills in translating from Latin into Bulgarian and vice versa of terminological collocations.
- Mastering the word-forming elements of ancient Greek origin, the ability to construct complex terms and understand them.
- Skills in reading and writing prescriptions.
- Skills for understanding the names of drugs, names of plants, terms from pharmacognosy.

Seminars which are conducted with a full group require working with textbooks. Preference is given to teamwork as a methodical approach.

Training forms: seminars, self-preparation, discussions on homework, given by the lecturer in advance, which the students must prepare.

8. Information resources.

- Oprova Yavora, Mirchev Dimitar. 2019 Liber de medicis. Textbook in Latin for students of Medicine and Dental Medicine. Plovdiv, Plovdiv University “ Paisii Hilendarski” ISBN 978-619-202-479-6
- Oprova, Y. 2018. Repetitorium Latinum. Workbook for students of pharmacy, medicine, dental medicine. “Lax book” publishing house. ISBN 978-619-189-103-0
- Latin language and pharmaceutical terminology, Ya. Oprova, T. Petrinska, S., 2010.

- Latin - textbook for medical specialties, R. Milanov, D. Mirchev, Plovdiv, ed. „Macros“, 2018.
- Nova terminologia medica polyglotta et eponymica, P. G. Arnaudova, S. 2003.
- Lingua Latina Medicinalis, V. Nikolova, I. Koleva, Sofia, 2000.
- Systematics of plants, I. Kiryakov, S., 1999.
- Pharmacotherapeutic reference book, I. Lambev, I. Krushkov, S., 2010.
- Test and prescription tasks on pharmacology – collection, L . Psychev, Pl.,2008.
- Pharmaceutical botany, B. Stefanova-Gateva, I. Asenov, Y . Benbasat, S., 2006.
- Specialised encyclopedia on medicinal plants in Bulgaria, author. team, S.,2007, approved by educational assistance from the Ministry of Education and Science.
- Latin-Bulgarian botanical spacial dictionary, A. Tashev, I. Ilieva, Sofia, ed. “Matcom”, 2017.
- Large Latin-Russian dictionary, I. Kh. Dvoretzky, <http://linguaeterna.com/vocabula/>
- English Latin dictionary online <http://en.glosbe.com/en/la/>
- Execution agency for medicines of the Ministry of Health. <http://www.bda.bg/>
- Caroli Linnaei Species plantarum.<http://www.gutenberg.org/files/20771/20771h/20771-h.htm>

9. Tests

- Two tests are conducted – one in the first and one in the second semester, participation during seminars, completing tasks for independent work are also encouraged. The first test includes nouns and adjectives and terminological elements in the first and second declension. The second one tests the nouns and adjectives, as well as the clinical terminological elements of the third declension. Depending on the lecturer’s preference – short written examinations during the semester are also conducted.

10. Self-learning and extracurricular student activity

It is recommended that students study regularly, week after week. It is recommended that vocabulary learning follows the pattern shown in the textbooks, which is the one established in the practice of Latin language acquisition. As part of the work in the seminars, the regular and timely completion of the teaching materials (textbooks, study notebooks and materials additionally distributed by the teacher) is obligatory.

11. Cooperation between lecturers and students

This cooperation should be expressed in:

- Lectures’ commitment to the students and their preparation in advance,

current difficulties in learning the material and opportunities with an individual learning program to achieve better results.

- Allocation of individual tasks in order to assist the student in mastering the subject.
- Involving students in teams on scientific tasks, research, projects, etc.
- Conducting consultations on specific issues, upon presentation of written teaching materials.

12. Examinations

The course is completed with a written exam after the end of the second semester.

The continuous assessment marks provided for in the course are given for:

1. At least two continuous assessment tests – respectively one test provided for in the syllabus for the first and second semesters.
2. Participation in seminars and preparation of the homework assigned by the teacher; marks from short written tests, at the discretion of the lecturer.
3. Individual presentations (at the discretion of the teacher).

13. Assessment standards:

- Excellent (6) – for good knowledge of information sources, in-depth knowledge of key and additional information and skills, meaningful and correct understanding of the matter, skills for solving complex problems, own thinking and argumentation of solutions.
- Very good (5) – for very well mastered key and additional knowledge, correct understanding of the material, skills for application of what has been learned in complex case studies.
- Good (4) – for mastering key and additional knowledge for managing tasks and exercises, but without being able to develop them into independent thinking;
- Average (3) – for acquired key knowledge and solutions to simple problems - mandatory knowledge of basic terms in pharmacy, pharmacognosy and botany, conversion between singular and plural, translation of prescriptions from Latin to English and vice versa.
- Poor (2) – does not meet any of the requirements above.

14. Formation of the final grade

The final grade determines the extent to which a student has achieved the learning goals set at the beginning of the course. It is a multicomponent grade and is formed by:

1. Mark(s) from continuous assessment and independent assignments; - the arithmetic average of 2 written tests per year, one per semester, together form 40% of the grade (20 % for the first test and 20% for the second one);
2. Marks from oral exams, tests and presentations (if they have been set) - complementing the final grade - 10%.
3. Grade from the final exam – 50% of the final grade.

$Q_{\text{final grade}} = k_1 * (Q_{\text{test 1}} + Q_{\text{test 2}}) / 2 + Q_{\text{participation/continuous assessment}} * k_2 + Q_{\text{final exam}} * k_3$

$k_1 = 0,40$ $k_2 = 0,1$ $k_3 = 0,50$

If one of the components of the final grade is Poor 2, then the final grade is necessarily Poor 2.

The components involved in the formation of the final grade and the coefficients of significance for each course are determined by the Academic Council with the adoption of this academic standard of the discipline. In a semester exam, students' written works are evaluated anonymously.

Exam materials are stored, and students are given the opportunity to get acquainted with them and the basis for assessment in accordance with the procedure announced in advance.

The period in which students are provided with access to the exam materials and results is up to 5 working days after the date of the exam. Each student is informed on the contents of the course's syllabus at the beginning of the training. This requirement is provided for in the Higher Education Act Art. 56. par. 1, "lecturers shall be obliged to develop and disclose in a more appropriate manner and description of the lecture course read by them, including titles and sequence of topics from the educational content, recommended literature, method of formation of the assessment and form of testing knowledge and skills".

The academic standard for the academic discipline is approved by Decision of the Academic Council – Protocol No. 9/26.11.2015 and is uploaded on the website of MU of Plovdiv.