CONTENTS

LIST OF ABBREVIATIONS.	12
0. PRAEFATIO 0.1. Latin in 21 century. Why? 0.2. Excerpt from history of Latin medical terminology. 0.3. Gymnastica intellecti conclusiva 0.4. Résumé.	13 20 29
1. PHONETICS. ORTHOEPY. SPELLING	30
1.1. Phonetics	30
1.1.1. Brief introduction to Latin phonetics	30
1.1.2. Latin alphabet	31
1.2. Orthoepy	32
1.2.1. Superscripts	32
Superstrated signs with two voices	32
Superscripts as designation of vowel value.	32
1.2.2. Specifics of pronouncing Latin letters and letter combinations	33
1.2.3. Accent	
1.3. Spelling	
1.3.1. Vowel sounds	
1.3.2. Consonants	
1.3.3. Sound combinations	
1.3.4. Latinization of Greek sounds	
1.3.5. Terminological minimum.	
1.4. Gymnastica intellecti conclusiva	
1.5. Résumé	43
2. ELEMENTS OF LATIN GRAMMAR	
IN ANATOMICAL TERMINOLOGY	44
2.1. Noun, Substantivum	44
2.1.1. Gender — genus	
Number — numerus	
Case — casus	45
2.1.2. Noun stem	46
2.1.3. Representing a noun in a dictionary	
2.1.4. Declension	48
2.1.5. Nominativus and genetivus in anatomical terminology	50
2.1.6. Sample declension of nouns	
2.1.7. Determining the gender of a noun from nominativus singularis	54
2.1.8. Greek nouns	55

2.1.9. Muscle names	57
2.1.10. Terminological minimum	59
Nouns of anatomical nomenclature for lesson 5–9	59
Greek words ending in -ma	59
Greek words ending in -on	59
Muscle names according to function	60
2.2. Adjective — adjectivum	61
2.2.1. Genus, number, case — genus, numerus, casus	61
2.2.2. Dictionary notation of Latin adjectives	62
2.2.3. Basic patterns of adjective dictionary forms and their declension	
2.2.4. Declining adjectives	64
Pattern for inflecting adjectives of all declensions and genders	64
2.2.5. Noun-adjective agreement	66
Samples of noun-adjective agreement in Latin	
2.2.6. Nominativus and genetivus of nouns and adjectives in anatomical	
terminology	83
2.2.7. Structure of anatomical term	
2.2.8. Word order in anatomical term	86
2.2.9. Adjectives defining size or position.	
2.2.10. Substantive adjectives. Naming intestines and tunics	
2.2.11. Synonyms in anatomical terminology	
2.2.12. Terminological minimum	
2.3. Preposition – Praepositio.	
2.3.1. Declining nouns and adjectives in anatomical terminology	
2.3.2. Terminological minimum for preposition phrases	
2.4. Conjunction – Conjunctio.	98
2.5. Word Derivation is Thought Derivation.	99
2.5.1. Initial word-building elements (prefixes).	. 101
Action or position 1	. 101
Action or position 2	. 102
Quality	. 103
Change of quality	104
Quantity	. 104
Approximate quantity	. 105
Relations between objects	. 106
2.5.2. Final derivational elements	107
Action, its result, state, property.	. 107
Quality, affiliation, belonging	. 108
Subject of action	109
Carrying, delivering	. 109
Producing, produced	110
Similarity, likeness.	
Possibility of action	
Plenty of	. 111
Superlative degree	. 112

Diminutive quality	112
A feature	
Location	
2.5.3. Terminological minimum of derivational elements	
2.6. Gymnastica intellecti conclusiva	116
2.7. Résumé	117
3. TERMINOLOGY OF PHARMACEUTICAL CHEMISTRY	119
3.1. Trivial and systematic names in chemistry	
3.1.1. Common stem combining forms	
3.1.2. Spelling of chemical names	
3.2. Chemical elements and simple substances	
3.2.1. Chemical elements	122
3.2.2. Simple substances	124
3.2.3. Numeral prefixes.	125
3.3. Chemical compounds. Acids	126
3.3.1. Systematic and trivial names for acids	127
3.3.2. Oxoacids	127
3.3.3. Hydracids	130
3.3.4. Correspondence between Latin and English names of acids	131
3.4. Chemical compounds. Oxides	132
3.4.1. Oxides. Peroxides. Hydroxides	132
3.4.2. Suboxides	
3.4.3. Correspondence between Latin and English names of oxides	
3.5. Chemical compounds. Salts	
3.5.1. Cations	
3.5.2. Anions	
Anions of salts of oxoacids and organic acids	135
Correspondence between Latin and Russian names of salts	
of oxoacids and organic acids	
Anions of hydracid salts	137
Correspondence between Latin and English names	
of hydracid salts	
Anions of acid and basic salts	138
Correspondence between Latin and English names of acid	
and basic salts	
Anions of potassium and sodium salts	
Correspondence between Latin and English names of potassium	
and sodium salts	
3.6. Chemical compounds. Radicals. Alcohols. Ethers	
3.6.1. Radicals	
Correspondence between Latin and English names of radicals	
3.6.2. Alcohols.	
Correspondence between Latin and English names of alcohols	
3.6.3. Aethers.	
Esters	145

Correspondence between Latin and English names of esters nad ethers .	. 146
3.7. Terminological minimum. Pharmaceutical chemistry	. 147
3.8. Gymnastica intellecti conclusiva	. 147
3.9. Résumé	. 147
4. ELEMENTS OF LATIN GRAMMAR	
IN PHARMACEUTICAL TERMINOLOGY	. 149
4.1. Nouns. Specifics of nouns in pharmaceutical terminology	
4.1.1. Terminological minimum for students of general medicine	
Dosage forms.	
Oils.	
Miscellaneous nouns.	
4.2. Adjectives. Specific features of adjectives in pharmaceutical terminology	
4.2.1. Adjectives in different contexts.	
4.2.2. Terminological minimum for students of general medicine	
Dosage forms. Termes with adjectives	
Adjectives in different contexts.	
Indicating the state of substance.	
Miscellaneous adjectives.	
4.3. Verb — verbum	. 153
4.3.1. Person — persona	. 153
Number — numerus	. 154
Tense — tempus	. 154
Conjugation	. 154
4.3.2. Presentation of Latin verbs in a dictionary	. 154
4.3.3. Mood of the verb — modus	. 155
4.3.4. Terminological minimum. Prescription formulas with verbs	. 158
4.4. Numeral — numerale	. 158
4.4.1. Greek numeral prefixes from 0.5 to 12.	. 158
4.4.2. Latin numeral prefixes from 0.5 to 4	
4.4.3. Latin numbers from 1 to 12, 100, 1000	. 159
4.4.4. Terminological minimum. Numerals	. 161
4.5. Adverbium	
4.5.1. Terminological minimum. Adverbs	
4.6. Preposition — praepositio	
4.6.1. Prepositions in pharmaceutical terminology	
Case endings of accusativus and ablativus:	
4.6.2. Terminological minimum. Prepositional phrases	. 165
5. TERMINOLOGY OF PHARMACOLOGY	. 167
5.1. Some background	. 167
5.2. Basic concepts of pharmaceutical terminology	. 172
5.2.1. Terminological minimum. Basic concepts of pharmaceutical	
terminology	. 175
5.3. Medicinal product	. 175
5.3.1. Action of drugs	. 175

5.3.2. Drug interaction	175
5.3.3. Dosing of medicinal products.	
5.3.4. Designation of drug action according to duration and intensity	
5.3.5. Routes of drug administration	
5.3.6. Placebo — nocebo	
5.3.7. Word order in the names of medicines.	
5.3.8. Names of medicines in nomenclature and prescription	180
5.3.9. Prescribing medicines.	181
5.4. Prescription	181
5.4.1. Studying prescription	182
5.4.2. Prescription structure	185
Prescription sections.	185
5.4.3. General rules of prescription layout.	185
5.4.4. Abbreviated and detailed prescription	186
5.4.5. Compound drug ingredients.	186
5.4.6. Standard prescription phrases	188
5.4.7. Quantity designation in prescription	
5.4.8. Designating route of adminsitration	
5.4.9. Additional prescription indications	
5.4.10. Prescription line	
Prescription model for countable dosage forms.	
Prescription model for uncountable dosage forms and drops	
5.5. Prescription samples	
5.5.1. Solid dosage forms	
5.5.2. Liquid dosage forms	
5.5.3. Soft dosage forms	204
5.5.4. Medicinal products in capsules, ampoules, syringe ampoules,	207
syringe tubes, vials	
5.6. Sample prescriptions for medicinal products	
5.7. Miscellaneous medicinal products	
5.7.1. Plant names in the names of medicines	
5.7.2. Substances of animal origin in the names of medicines	
5.7.3. Surnames in the names of medicines	
5.7.4. Names of synthesized drugs	
Systematic names of synthesized drugs	
Trivial names of synthesized medicinal products	
Gymnastica intellecti	
Proprietary trivial names of synthesized drugs.	
Nonproprietary trivial names of synthesized drugs	
5.7.5. Terminological minimum. Traditional combining forms	
5.8. Pharmacological classes	
5.8.1. Classification of medicines by pharmacological class	
Terminological minimum. Pharmacotherapeutic groups	
5.8.3. International nonproprietary names	
5.6.5. International nonproprietary fiames	<i>∠</i> ∠0

Terminological minimum. Common stems for INN	227
Hyphen with common stems for INN	228
Spelling of common stems for INN	229
INN transliteration	
INN update	230
INN and internet	
National non-proprietary names	
Non appropriated names	
5.9. Abbreviations in prescription	
Abbreviating instructions for the pharmacist	
Abbreviations of substance names	
Abbreviating dosage forms.	
Abbreviations for quantity designations	
Abbreviating the way of making and administration	
Abbreviating attributes.	
Terminological minimum. Prescription abbreviations	
5.10. General terminological minimum of pharmacology	
5.11. Gymnastica intellecti conclusiva	
5.12. Résumé.	
6. CLINICAL TERMINOLOGY	
6.1. Structure of clinical terms	
6.2. Clinical terms — simple words	
6.2.1. Terminological minimum. Processes and states	
6.2.2. Terminological minimum. Situations	
6.3. Clinical terms — compound words	
6.3.1. Initial derivational elements in clinical terms	
6.3.2. Connecting vowels in clinical terms.	
6.3.3. Combining forms in clinical terms	243
6.3.3-a. Terminological minimum.	
Combining forms — anatomical names	244
6.3.3-b. Terminological minimum.	
Combining forms naming processes, states and their outcome	246
6.3.3-c. Terminological minimum.	
Combining forms naming secretions and liquids	248
Place of combining form: names of secretions	
and fluids in the term	
6.3.3-d. Terminological minimum. Combining forms for signs	249
6.3.3-e. Terminological minimum. Combining forms – names	
of investigation and therapeutic techniques	251
6.3.4. Final elements in clinical terms	
6.4. Gymnastica intellecti conclusiva	253
6.5. Résumé	
7. REFERENCES	
/. NEFENEINUES	231

8. ADDITIONES.	258
8.1. Latin to English anatomical nomenclature	258
8.2. English to Latin anatomical nomenclature	291
8.3. Latin to English glossary of anatomical terms	324
8.4. English to Latin glossary of anatomical terms	362
8.5. Map of the Roman Empire in 2nd century	402
8.6. Excerpt from the history of ancient Greek and Latin	402
8.6.1. Ancient Greek and Latin	402
8.6.2. Latin and Romance languages	404
8.7. Genealogical tree of Indo-European languages	405
8.8. International Latin abbreviations and symbols	406
8.8.1. International Latin abbreviations	406
8.8.2. International abbreviations of medical Latin phrases	407
8.8.3. International medical symbols	409
8.9. Etymology of some anatomical terms	409
8.10. Gaudeamus	
8.11. Glossaries of pharmaceutical and clinical terminology	418
8.11.1. English to Latin glossary of pharmaceutical	
and clinical terminology	418
8.11.2. Latin to English glossary of pharmaceutical	
and clinical terminology	453

0. PRAEFATIO

The boundaries of my language reflect the boundaries of my world. Ludwig Wittgenstein (1889–1951)

0.1. LATIN IN 21st CENTURY. WHY?

The first thing that is usually remembered about the Latin language is that it is a language that is dead and ancient.

Right, **dead**. However, it is not dead because no one uses it. It is used, and a lot: most educated scholars in all countries of the world know Latin; there are books, newspapers and magazines published in this language; there are television and radio broadcasts, many websites on the Internet; and there is the Vatican state where Latin is the official language. At the same time, there are many small peoples, nationalities and tribes in the world who speak their own special language, which is different from the language of their neighbors. The language of the smallest tribe lives as long as these people are alive, as long as they think and communicate in it. The language becomes dead when the people cease to live. There are no Latin people now, and therefore their language remains dead, no matter how much people of other nations use it. Everyone, even those who use it a lot, have a different language, their own mother tongue (Russian, English ...) as their first language of thought and communication.

Yes, **ancient**. This language was spoken by a tribe that became known since 8th century BC in the middle part of the Apennine Peninsula (modern Italy); they called this region *Latium*, and themselves – *Latini* (Latins), their people – *populus Latinus* (Latin people), their language – *lingua Latina* (Latin).

The legend goes that in 753 BC the main city of the Latin people — *Roma* (Rome) — was founded and named after one of the founding brothers (Romulus and Remus) (in Russian they call it Rome). The inhabitants of the city of Roma, and later all the inhabitants of the Roman state, called themselves *Romani* (Romans). They were quite belligerent and conquered vast territories around the Mediterranean.

In the **1st century BC** the heir of Gaius Julius Caesar, Octavian Augustus, made the honorary military rank «imperator» a permanent title of the head of state, and the state began to be called the *Imperium Romanum* (Roman Empire). The empire lasted as a state until the 5th century AD (see 8. Additiones; 8.6. Map of Roman Empire).

However, the history of culture and language emphasizes a much longer time period than the political history of the Roman state.

Having conquered Greece, in the middle of the 2nd century BC, the Romans encountered a much more developed culture of Ancient Greece than their own culture was then; there are known written monuments in the ancient Greek language dating to the 15th century BC, the golden age of the Greek state and culture was in the 5th century BC. Showing themselves to be rather humane conquerors, the Romans recognized the superiority of Greek culture and understood the need to learn from the defeated Greeks. Since that time the Greek language became the second official language in the state, the Romans necessarily knew the Greek language; they began to build beautiful houses decorated in Greek style; they wore Greek clothes, studied Greek arts and sciences, and developed them in their homeland in their Latin language¹.

Thus by the 1st century BC the Roman culture united the primordial Latin principles and the centuries-old remarkable achievements of the Greeks creating what later became known as the classical culture (Latin + Greek).

In the **2nd century AD** the Roman Empire reached the peak of its power and size. The empire united many ethnic groups, each of which originally had its own land, culture, history, customs, and beliefs. This was the strength of a single state, but this was also its weak point, since many peculiar ethnic groups inevitably show contradictions².

Understandably, the unity of any state, in addition to military, political and economic community, is necessarily associated with the unity of the official language, Latin in the Roman Empire. However, the status of the Latin language varied in different areas of the Empire.

In the east of the Roman Empire (east of Greece), the Greeks had settled on the islands and the shores of the Mediterranean and Black Sea long before the arrival of the Romans, adding their own Greek languages to the local tongues. After the conquest of these territories by the Romans, Latin did not supplant Greek and local languages, but always coexisted with them, remaining predominantly the language of policy-makers.

In the west of the Roman Empire (west of the Apennine Peninsula) the situation was completely different. The Romans came here after defeating Greece, after the flourishing of their own culture in the 1st century BC. In the war, the Romans were much more experienced than the small peoples of Western Europe, and so they conquered them. Likewise, the Latin language was the language of a much more powerful culture than that of the small local peoples, and gradually supplanted these languages, completely replacing them for all the numerous peoples.

In the **2nd to 5th century** the vast territory of the empire continues to engender internal contradictions. Management from one center is complicated by differences in mentality among different peoples, who gradually became more and more clearly aware of their identity and took the liberty of showing more and more active opposition to centralized rule from Rome. At the same time, the pressure of external enemies with their territorial claims was increasing.

5th century. The contradictions between the regions and the center and the effects provided by external forces did their job. In 476, the Great Roman Empire finally collapsed. And it was now that the ever-present difference between East and West manifested itself: further fate of the eastern and western peoples became strikingly

¹ See 8. Additiones; 8.7. History of development of ancient Greek, Latin and Romance languages (diagram).

² See for animation on the development of Roman Empire http://ru.wikipedia.org/wiki/ File:Roman_Republic_Empire_map.gif

different. In the East, where Latin was the language of power, once this power departed, Latin was no longer in active use. Life went on in the local and Greek languages as it had done before the Romans.

In the West, even when the power of Rome discontinued, the Latin language continued to be one and only. The languages of small peoples who inhabited the territory of Europe before the arrival of the Romans eventually fell out of use, giving way to a stronger Latin language. After the collapse of the Roman Empire, the peoples of the West, now with complete political independence, continued to speak the same common Latin language. Other languages did not survive during the five centuries of Roman rule in Europe.

For many centuries, Latin continued to be a living language. All living things move and develop. The Latin language also developed. Gradually, changes took place in it, as they do in any living language. These changes varied in different regions and among different peoples: the language of people living on the Iberian Peninsula (now Spain and Portugal) began to differ from the languages, for instance, of the peoples of France or the Black Sea region (now Romania and Moldova). These languages are still very close, preserving the legacy of their common ancestor, Latin (see 8. Additiones; 8.8. Development of Romance languages from Latin).

In the **Middle Ages** in Western Europe, the Latin language and the languages that arose on its basis were almost equally used, but with their own changes and peculiarities: Italian, Spanish, Portuguese, French, Provencal, Romanian... having originated from the language of the Romans (*Romani*) these languages are now called Romance. In total, 10 Romance languages, direct descendants of Latin, live and flourish now.

The last centuries of the Middle Ages in Western Europe were the period of formation of vocational education that used the Latin language. The famous medical school of Salerno (southern Italy) was known since the late 9th century; it existed for about a thousand years. The main provisions of the concept developed in Salerno are set forth in Latin in the Salerno Health Code written by Arnold of Villanova.

In the 12th century the first European university was founded in Bologna (Italy). Soon, by the early 13th century, universities were set up in Paris, Oxford, Cambridge, and Montpellier, famous for its medical school.

The **14–16th century** in Europe was the time of the Renaissance: a revival of interest in human feelings in all their individual originality, a return to the philosophy of humanism in its best traditions of ancient humanism, ancient culture, classical Latin and Greek language. The Renaissance philosophy and artistic humanistic New Latin literature extended the life of classical Latin, but by this time the national languages of the peoples of Europe had already reached such a degree of development that they were able to supplant Latin in the spheres of everyday communication and literature.

Nevertheless, in the 17–18th century the Latin language still retained its positions in science, education, Catholic service. Understandably, there can be no science without education, but science and religion themselves are international by nature, therefore they require one interethnic language. For everyday communication the Italian Andreas Vesalius (16th century), Englishman William Harvey (17th century), Russian M.V. Lomonosov (18th century) spoke and wrote in their native Italian, English, Russian correspondingly, because few people are interested in everyday