

## Tbilisi State Medical University

Faculty	Pharmacy
Title of the Educational Program	Pharmacy Bachelor's Program
Qualification/ awarded academic degree	Bachelor of Pharmacy
Program status. Date and number of the relevant decision	Accredited. Decision No. № 198. 07.11. 2019
Head of Educational Program	Professor Dali Berashvili
Length of program	240 ECTS credits
Language of study	Georgian
Aims of the Educational Program	<ul style="list-style-type: none"> <li>➤ <b>To give the student knowledge:</b> <ul style="list-style-type: none"> <li>• On the biomedical and chemical basis of the pharmaceutical sciences;</li> <li>• About basic principles of pharmaceutical activity.</li> </ul> </li> <li>➤ <b>To give the student:</b> <ul style="list-style-type: none"> <li>• Ability to engage in pharmaceutical care (within competence);</li> <li>• Ability to perform pharmaceutical analysis and make conclusions;</li> <li>• Ability to participate in the production of pharmaceutical products.</li> </ul> </li> </ul>
Prerequisite for admission to the Educational program	<p>The prerequisites for admission to the educational program are a certificate of complete general education, for citizens of Georgia - a certificate confirming the passing of the unified national exams.</p> <p>The prerequisites for admission to the program include the results obtained at the unified national exams, taking into account the priorities of the subjects established by the university, their respective coefficients and the minimum competence threshold.</p> <p>Citizens of foreign countries and stateless persons who have obtained the right to receive higher education according to the legislation of the country in which they received secondary education or its equivalent have the right to study without passing unified national exams.</p>
Annotation of the program	<p>The Pharmacy Bachelor's education program maintains a balance between basic, social, pharmaceutical and medical study courses, with special attention being paid to the acquisition of practical skills. The curriculum is drawn up based on the experiences of developed countries. After completing the first level of education, the student passes an integrated exam in integrated module of Pharmacy and is awarded the academic degree of Bachelor of Pharmacy. He/she can work in practical pharmacy or continue his studies in a master's degree.</p> <p>Duration of the Pharmacy Bachelor's program is 4 years, i.e 8 semesters and includes 240 ECTS credits:</p> <ul style="list-style-type: none"> <li>• <b>104 credits</b> – basic and general-transfer study courses, among them,</li> </ul>

	<ul style="list-style-type: none"> <li>▪ 48 credits – basic medical study courses,</li> <li>▪ 40 credits – general study courses,</li> <li>▪ 11 credits – foreign Language,</li> <li>▪ 5 credits – scientific research oriented study courses.</li> <li>• <b>94 credits</b> – professional study courses;</li> <li>• <b>12 credits</b> - elective study courses;</li> <li>• <b>30 credits</b> – Integrated module of Pharmacy.</li> </ul>
<p style="text-align: center;"><b>Students' Knowledge Assessment System</b></p>	<p>Student assessment is carried out in accordance with the Order # 3 of the Minister of Education and Science of Georgia of January 5, 2007.</p> <p>The European Credit Transfer and Accumulation System (ECTS) is implemented at Tbilisi State Medical University; ECTS is based on learning outcomes and student-oriented learning. Its purpose is to facilitate the planning, implementation, assessment / reference of learning units, as well as student mobility.</p> <p>The components of assessment of student achievement are intermediate assessment and final assessment, the sum of which is the final assessment (0-100 points), which represents the sum of intermediate evaluations (minimum competence limit - 31 points) and final evaluation. The right to pass the final exam is given to a student who can accumulate 51 points with the sum of the minimum positive evaluation of the intermediate evaluation and the final exam.</p> <p>The exam is considered passed if the student receives at least 20 points (50% or more of the maximum exam grade).</p> <p><b><i>The evaluation of the student's work includes:</i></b></p> <p>A) Intermediate assessment, which includes the sum of points obtained according to the methods/parts of knowledge assessment provided by the syllabus of the course (students' weekly / daily current academic, practical activities, presentation / s, colloquium / s, etc.) and is determined by 0-60 points.</p> <p>B) evaluation of the final exam. Out of 100 points of maximum evaluation of the study course / module, 40 points are allocated to the maximum evaluation of the final exam.</p> <p>The student is allowed to take the final exam if the sum of his / her mid-term assessments reaches a minimum of 31 points.</p> <p>The evaluation system allows five types of positive and two types of negative evaluations.</p> <p>➤ <b>Positive evaluations are:</b></p> <p>A - Excellent – 91-100 points;</p> <p>B - Very good - 81-90 points ;</p> <p>C – Good - 71-80 points;</p> <p>D – Satisfactory - 61-70 points;</p> <p>E – Acceptable/Sufficient - 51-60 points.</p> <p>➤ <b>Negative evaluation are:</b></p>

	<p>(Fx) – Don't pass – 41-50 points , which means that the student needs more work to pass and gives the right to take an additional exam after some independent work (not less than 5 days);</p> <p>(F) - Failed – 40 points and less, which means that the work carried out by the student is not enough and he / she has to study the subject from the beginning.</p> <p>The additional requirements for the assessment of the student's achievements in a separate study courses are described in detail in the relevant syllabus and are known to the students.</p>
<p><b>Learning Outcomes</b></p>	<p><b>Knowledge and understanding</b></p> <ul style="list-style-type: none"> <li>✓ Knowledge of basic and biomedical study courses and critical understanding of knowledge in pharmaceutical study courses;</li> <li>✓ Knowledge of profile study courses to work out the pharmaceutical activity;</li> <li>✓ Knowledge of importance of pharmaceutical raw materials, production, analysis, standardization for effective, safe and high quality pharmacotherapy.</li> </ul> <p><b>Skills</b></p> <ul style="list-style-type: none"> <li>✓ Manufacture and serial production of medical raw materials, substances, pharmaceuticals.</li> <li>✓ Analysis of Medical Raw Materials, Substances, Analysis of pharmaceuticals, Quality Control, Standardization, Chemical-Toxicological Analysis;</li> <li>✓ Data collection during the implementation of pharmaceutical activity, critical analysis, and drawing grounded conclusions. Preparing / presenting reports on ways to solve emerging problems using information and communication technologies;</li> <li>✓ Implementation of a research or practical project based on predefined guidelines and analysis of information in the scientific literature.</li> </ul> <p><b>Responsibility and autonomy</b></p> <ul style="list-style-type: none"> <li>✓ Understanding his / her place, role and responsibility in professional activities, participating in the establishment of new standards for the production, quality control, distribution, pharmaceutical care and rational pharmacotherapy of medicines;</li> <li>✓ Based on objective assessment of his / her own knowledge and skills, independently identifies and plans the need for learning for continuous professional development.</li> </ul>
<p><b>Areas of Employment</b></p>	<p><b>Based on the acquired knowledge and skills, Bachelor of Pharmacy can employ within the scope of competence:</b></p> <ul style="list-style-type: none"> <li>✓ in the healthcare system;</li> </ul>

	<ul style="list-style-type: none"> <li>✓ in pharmaceutical company;</li> <li>✓ in scientific research institute;</li> <li>✓ in pharmaceutical enterprise;</li> <li>✓ in the laboratory of the medicines quality assurance, forensics bureau;</li> <li>✓ in pharmaceutical bases;</li> <li>✓ in pharmacy;</li> <li>✓ in chemical reagents and medical equipment facilities.</li> </ul>
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## The Study Plan of Pharmacy Bachelor's Program

N	Study Course/Module	ECTS credits	Amount of credits
<b>I semester</b>			
1.	Basics of Human Anatomy	3	30
2.	General and Inorganic Chemistry	4	
3.	Basics of Histology	3	
4.	Medical Biophysics	3	
5.	Pharmaceutical Botany 1	5	
6.	Medical Biology	2	
7.	Pharmaceutical Ethics and Deontology	2	
8.	Information Technologies with Biostatistic Elements	2	
9.	Foreign Language 1	4	
10.	Elective study course: Professional Latin Language/Bioethics	2	
<b>II semester</b>			
1.	Basics of High Mathematics	3	30
2.	Pharmaceutical Care 1	3	
3.	Communication skills	3	
4.	Basics of Parasitology	3	

5.	Pharmaceutical Botany 2	4	
6.	Analytical Chemistry	4	
7.	Foreign Language 2	4	
8.	Basics of Scientific Research	2	
9.	Basics of Academic Writing	2	
10.	Elective study course	2	
<b>III semester</b>			
1.	Organic Chemistry 1	4	<b>30</b>
2.	Basics of Microbiology and Virology	4	
3.	Human Physiology 1	4	
4.	Physical and Colloid Chemistry	4	
5.	Basic Environmental Health	3	
6.	Clinical Skills	2	
7.	Foreign Language 3	3	
8.	Molecular Biology with Genetics	3	
9.	Basics of Research of Natural Products	3	
<b>IV semester</b>			
1.	Instrumental Methods of Analysis	4	<b>30</b>
2.	General Biochemistry	5	
3.	Human Physiology 2	4	
4.	Pathology 1	3	
5.	Pharmacognosy 1	5	
6.	Organic Chemistry 2	4	
7.	Basics of Immunology	3	
8.	Elective study course	2	
<b>V semester</b>			
1.	Pharmaceutical Chemistry 1	5	<b>30</b>
2.	Toxicological Chemistry 1	4	

3.	Pharmacognosy 2	5	
4.	Technology of Galenic Preparations	7	
5.	Pharmacology 1	4	
6.	Pathology 2	3	
7.	Elective study course	2	
<b>VI semester</b>			
1.	Pharmaceutical Chemistry 2	10	<b>30</b>
2.	Pharmacology 2	4	
3.	Toxicological Chemistry 2	4	
4.	Technology of Pharmaceutical Dosage Forms	10	
5.	Elective study course	2	
<b>VII semester</b>			
1.	Organization and Economics of Pharmaceutical Activity	4	<b>30</b>
2.	Clinical Pharmacy	7	
3.	Pharmacotherapy	8	
4.	Basics of Pharmacokinetics	4	
5.	Pharmacy Management and Marketing	3	
6.	Technology of Cosmetics and Perfumes	2	
7.	Elective study course	2	
<b>VIII semester</b>			
1.	<b>Integrated Module of Pharmacy</b>		<b>30</b>