Tbilisi State Medical University

Faculty of Pharmacy

Educational PhD Program – "Pharmacy"

Language of Instruction

Accreditation Date – 11.10.2019

Director of PhD Program - Professor Aliosha Bakuridze

Title of Educational Program	PhD Program – "Pharmacy"
Stage of higher education	III
Awarded academic qualification/degree	Academic Doctor of Pharmacy
Credit Value of the Program	45 credits /minimum 3 years
Language of Instruction	Georgian
Program Objectives	The goal of the program is to prepare independent, competitive academic staff/researchers for universities and scientific-research institutions, who will have knowledge based on the latest achievements in pharmacy and its detailed sub-fields, allowing for the expansion of existing knowledge and the use of innovative methods; The graduate is expected to cultivate the capability for: independent planning and execution of research in pharmacy, adhering to the principles of academic integrity; providing critical analysis, synthesis, evaluation and development of research and analytical methods and approaches with a specific emphasis on generating new knowledge; making the correct and effective decision independently to solve the problem; cultivating a sense of responsibility and autonomy, enabling them to prepare, lead, and execute research projects as well as scientific forums, drawing from the latest achievements in the field of pharmacy.
Prerequisites /Requirements for admission to the program	A PhD candidate must hold a Master's degree or an equivalent academic qualification in Pharmacy. Admission to the program is exclusively granted upon the successful completion of exams in the chosen specialty aligned with the field of doctoral research (e.g., pharmacognosy,

	pharmaceutical and toxicological chemistry, pharmaceutical technology, social and clinical pharmacy) and English language. The B2 level English proficiency is mandatory for admission to the PhD program.
Teaching Methods	The teaching methods are align with contemporary methodological standards, encompassing both general and specific requirements essential for the effective training of PhD students. The program is designed in accordance with the European Credit Transfer System (ECTS). Achieving the results envisaged by the PhD program is ensured through individual methods of academic activity and the synergy of these methods, including the direct performance of the PhD program scientific component by the doctoral student. The foundational research component of the PhD program and its study courses are based on modern scientific knowledge, which implies the full and adequate inclusion of accumulated and latest, evidence-based knowledge and methodology in the educational process, ensuring the successful attainment of the learning outcomes outlined by the program. Teaching is based on student-centered methods, which, in addition to the research work, aligning with the specific field of doctoral research, means the active engagement of the PhD student in the learning process, including/may include case-based (CBL) and problem-based learning (PBL), cooperative learning, case study, role-playing and situational games, demonstration methods, practical methods, discussion-debates, collaborative work, induction, deduction, analysis and synthesis, explanatory method, action-oriented teaching, E-Learning, etc. The PhD

	student is the direct executor of the research component.
Learning Outcomes	**Knowledge and understanding** The program learning outcomes are in complete alignment with the knowledge and skills essential to function as independent researchers, as well as the possibility of employment within the acquired competence. The PhD graduate is acquainted with: • Innovative methods encompassing research, processing, and separation of biologically active substances, as well as structure determination, standardization, and quality assurance procedures applied to plant, animal, and mineral raw materials. • Instrumental methods and medical biological aspects of innovative bio-pharmaceutical, technological, pharmacokinetic analysis of traditional and new generation pharmaceutical forms design, recipe, technology development, standardization and research. • Instrumental methods and medical biological aspects essential for conducting innovative biopharmaceutical, technological, and pharmacokinetic analysis related to the design, recipe formulation, technology development, standardization, and research of both traditional and new-generation pharmaceutical forms. • Modern, specific, highly effective methods of chemical-toxicological research; the graduate possesses a keen awareness of the necessity for knowledge grounded in the latest achievements in pharmacy. This is accomplished through a critical understanding of existing knowledge,

	along with the expansion and utilization of innovative methods and approaches. **Ability**: A graduate is capable of: • Independent planning and implementing research in pharmacy and its detailed sub-fields, adhering to the principles of academic integrity; developing the novel research and analytical methods and/or technologies, with a specific focus on generating new knowledge; • Exploring natural medicinal resources, including rational processing, separation of biologically active substances, identification, standardization, and quality assurance through the application of innovative or modern methods and techniques. • Critical analysis of disadvantages of traditional pharmaceutical forms, evaluation and improvement, developing and research of new-generation pharmaceutical forms, employing innovative or new technologies, methods, and approaches to achieve advancements in the field. • Predicting parameter interference during polypragmasy; participating in drug clinical trials and rational pharmacotherapy. • Presenting and effectively communicating research findings in a clear and substantiated manner, both to colleagues and general public. **Responsibility and autonomy** • PhD graduate can independently prepare and present grant

	proposals and other scientific projects, drawing on the latest advancements or their own innovative research. In addition, they possess the capability to organize scientific forums of various scales.
Fields of Graduate Employment	Pharmacy PhD graduates can pursue employment opportunities in specialized departments within the Faculty of Pharmacy at Tbilisi State Medical University, as well as in other educational institutions of pharmacy direction. In addition, they may find roles in scientific research institutes or practical pharmacy settings.

PhD Program "Pharmacy" – Structure of Study Component – 45 ECTS Credits

№	Course/Module Title	Credits	Credits by semesters					
			I	II	III	IV	V	VI
Basic courses/modules - 26 ECTS credits								
1	Scientific research methodology and biostatistics	7	3	4				
2	Pedagogy and Psychology in Higher Education	5			5			
3	Ethics of biomedical sciences	4	4					
4	Professional English in Use Medicine	10	3	3	4			
Elective Courses - 4 ECTS credits								
1	Research Work Methodology	2		2				
2	Evidence-based medicine in medical	2		2				

	practice							
3	Academic writing in English	2			2			
4	German language	2		2				
5	French Language	2		2				
6	Russian language	2		2				
Basic Course - 5 ECTS credits								
1	Scientific research methods in pharmacy	5	5					
Program elective courses - 10 ECTS credits								
1	Modern technologies in pharmacy	10	10					
2	Natural medicinal resources	10	10					
3	Scientific aspects of drug and xenobiotic analysis	10	10					
4	Drug policy	10	10					